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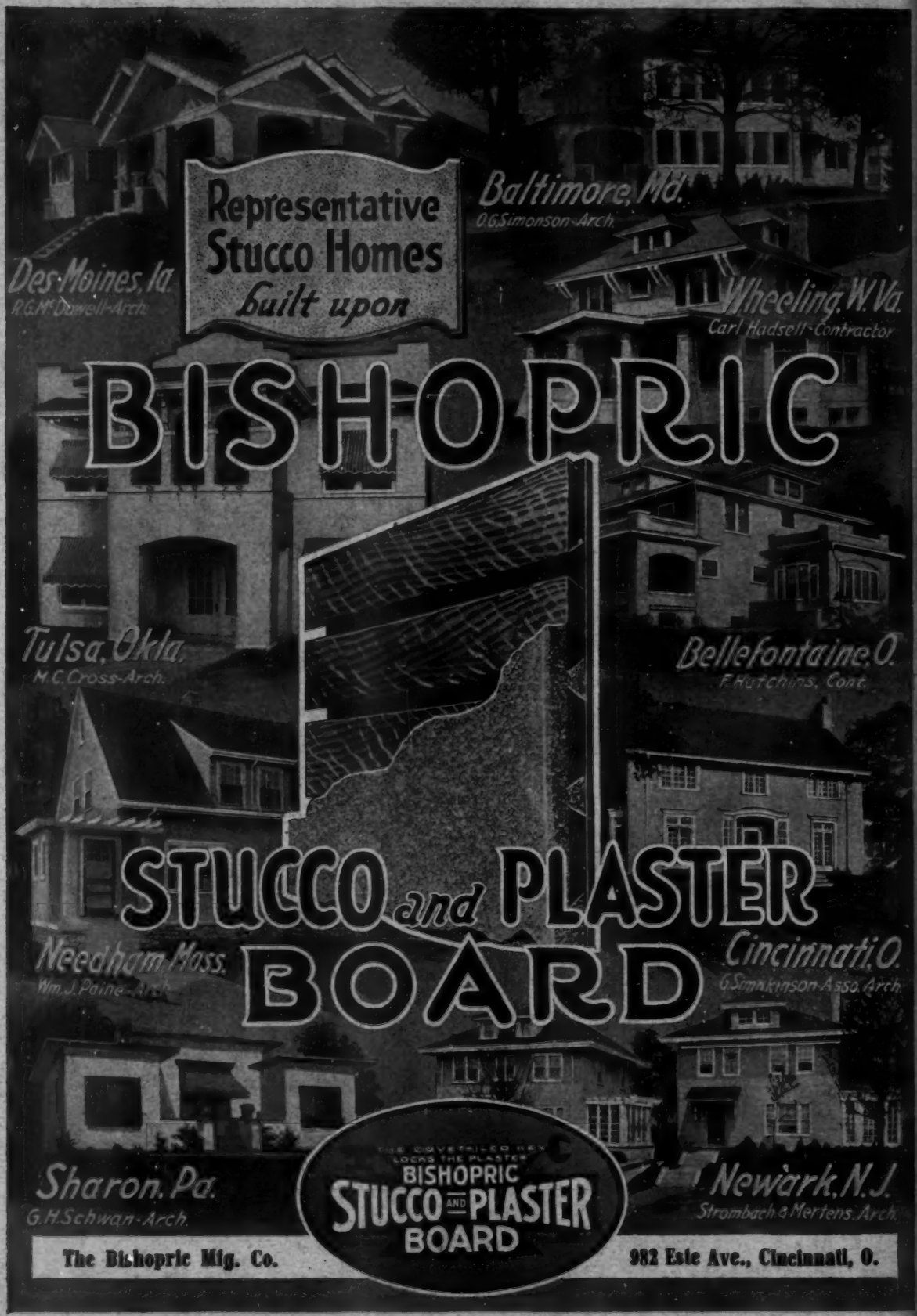

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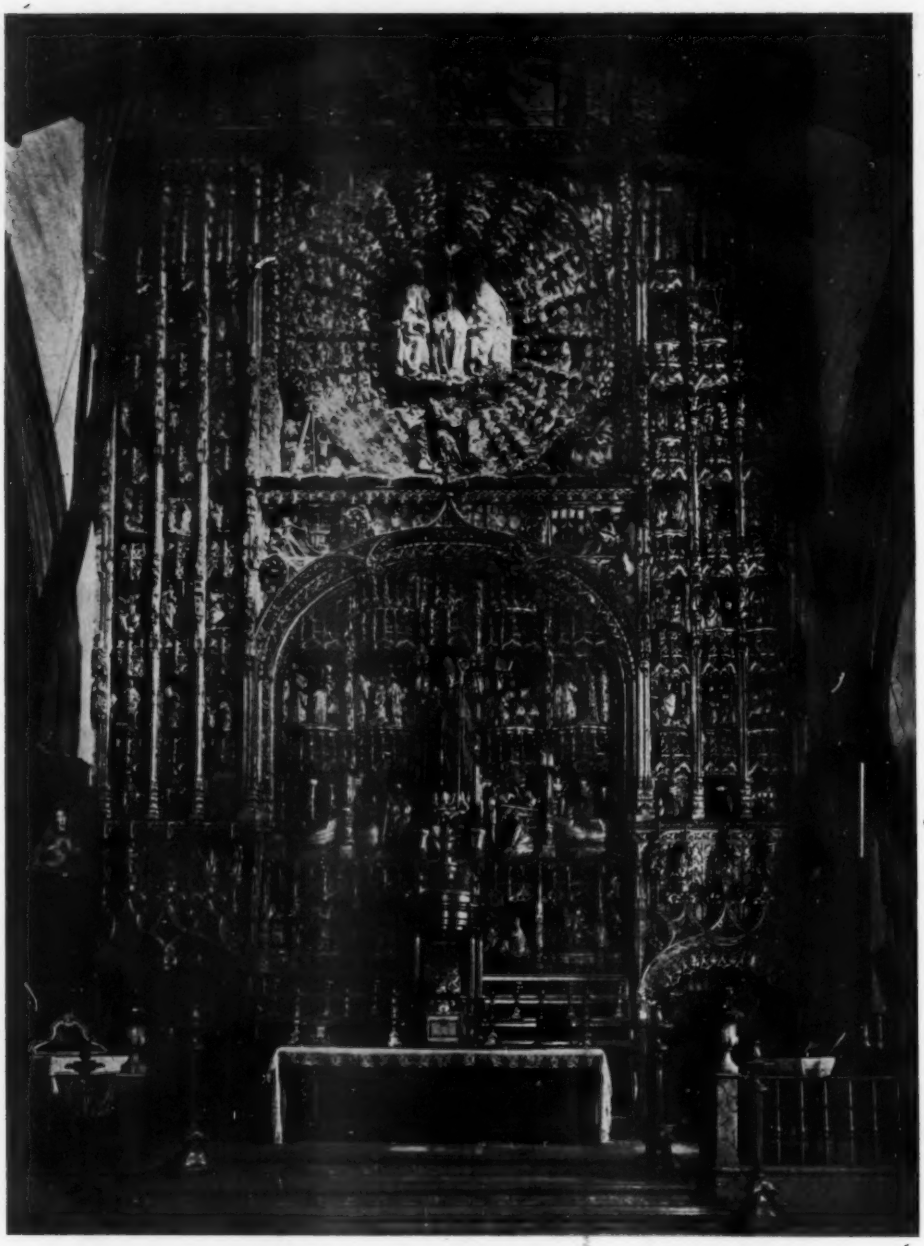

ALTAR OF THE CHURCH OF SAN NICOLAS, BURGOS

THE AMERICAN ARCHITECT

VOL. CXVII. WEDNESDAY, JANUARY 28, 1920 NUMBER 2301

Psychiatric Classification in Prison

By LEWIS F. PILCHER, *New York State Architect*

COMMERCIAL efficiency is determined by the use of the by-products of manufacture. Prisoners are by-products of society.

The modern enterprise that used to discard as waste the by-products of its plant now aims to reduce its overhead and better its system by returning to the community in usable form that which in past times had been considered as lost and unavailable material. Is it not true that the criminal has been for the most part considered in the past as an irreclaimable waste of society, his progress toward a better life inhibited by being held in the strait-jacket of strictly materialistic institutional management and maintenance? As in the case of manufacturing concerns so in the modern penal system, its success will be determined by the economic use, and measured, not by the development of model prisoners enchained securely behind bastioned walls, but by returning to society decent citizens.

In the past the achievement of positive human results has been seemingly impossible to obtain. The chief reason for this failure was due to the inevitable clash between institutional and political interests that always arose and rendered abortive the many attempts that have been made to treat successfully the complex questions of crime and punishment.

Any betterment procedure must be in the direction of individualization. The modern prison, penitentiary, jail or reformatory should embody in their respective organizations the function of scientific study of the individual prisoner—and this should be made the fundamental element of the entire correctional process.

The dynamic unit of all human problems is the individual. Modern medical science makes the appraisal of this unit possible through the medium of psychiatric treatment and social service research. An undertaking, however, which is really consciously intent on reclaiming the individual prisoner to the limit of his capacity with a view of preventing future returning to misbehavior, would be hampered in its effects if it were to concern itself solely with the native endowments of the individual prisoner. The source of the prisoner's particular being, life, is a dynamic process; and every contact the individual makes throughout life not only leaves its impression on him, but shapes his mental attitude toward his environment. Thus, it is obvious that the housing problem, touching as it does every phase of the life of man, is of fundamental importance, for the environment determines through the influence of the associative imagery of the inmate, a control of his conscious acts and the mechanization of the conscious acts of the prisoner establishes his habits. The manner in which the prisoner has been handled in the past has unquestionably been responsible, if not for the great amount of criminal careers, certainly for the confirming of the individual in his life of crime. The character and kind of prison we have had, in the past, had as its sole aim to achieve mediæval security; a housing condition crude and archaic in conception, which has not helped to relieve and protect society against the spirit of crime, but on the contrary has actually tended to its increase.

Here in New York City the municipality protects the interests of its citizens by the enactment of a structural and sanitary code. Structural safety and physical security and health are provided for all classifications of human activities under the maturely established provisions of that code.

Scientifically, psychologically and practically important as is the structural side of this great prison problem, I have yet to see any workmanlike attempt to establish for prison planners a code, so carefully developed and yet with an elasticity to adapt it to various localities and climates, to the end that the inhumanity of the present day, 1920, toward prisoners would be for all time impossible.

The tremendous security and help that such a code would provide for the development of state

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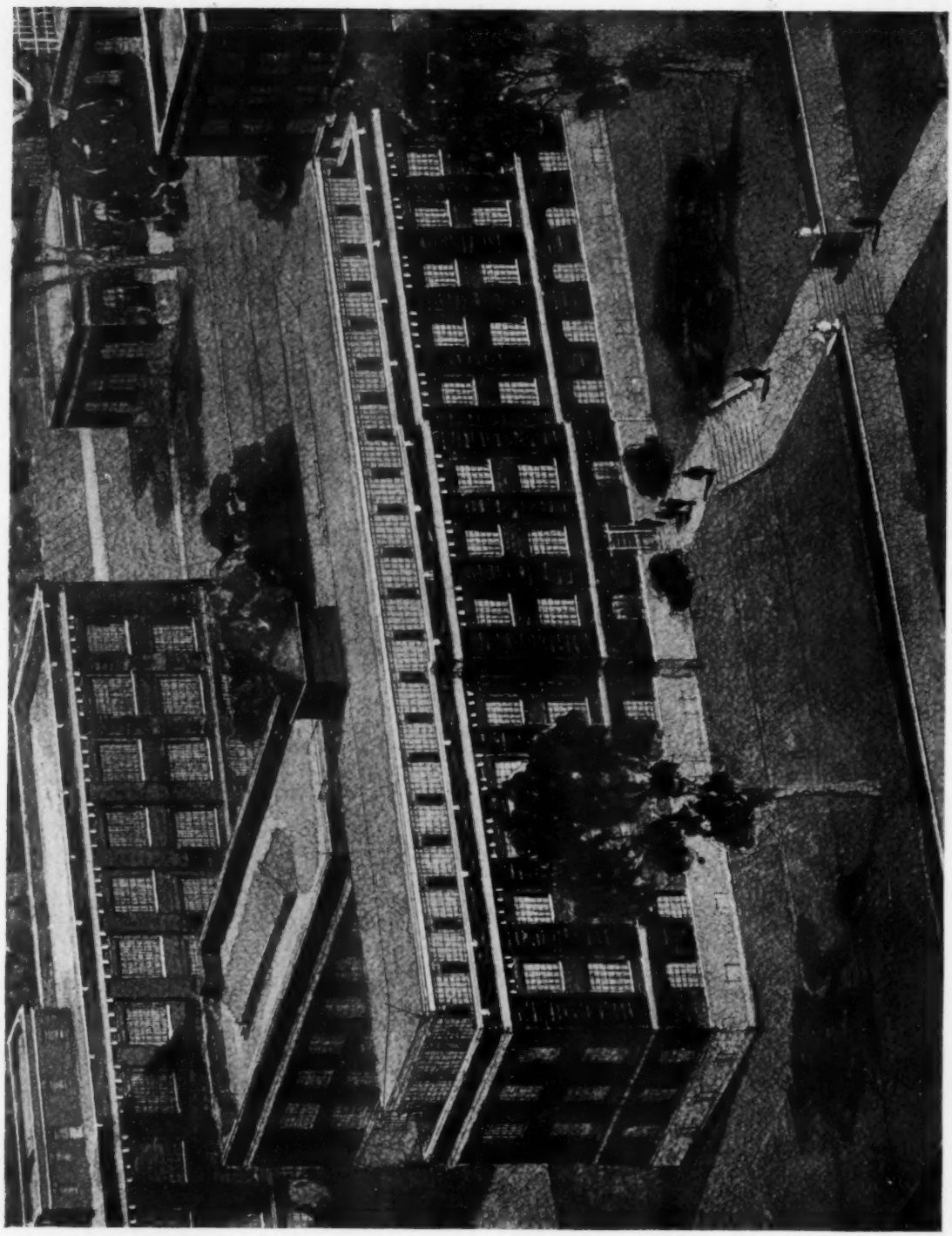


THE PSYCHIATRIC BUILDING, SING SING
LEWIS F. PILCHER, *NEW YORK STATE ARCHITECT*

prisons and jails and reformatories is at once apparent.

The complete findings of a competent Code Committee would be the average of the experience of all penal housing problems throughout the country and should be determined by a two-group committee, acting under an organization of national scope. In one group should be available the experience and suggestion of the leaders in penal administration, medicine, psychiatric, industrial, vocational, educational and religious activities. The second group should consist of a small number of architects, engineers or contractual experts—men who have actually planned and structurally executed prison buildings and whose practical experience would enable them sympathetically to translate into constructive form and crystallize the theoretical standards recommended by the sub-committee on strictly scientific phases.

As it is an admitted fact that apperception and interest are the cardinal principles of thought foundation, it may be seen that the chance of improvement in the prisoner will vary in accordance with the thought and action required of him. In order, therefore, that this idea may be efficiently carried out, the prisoner, immediately on commitment to prison, should receive the benefit of an expert clinical examination to determine through his mental and economic possibilities what branch of work he should follow during his term of imprisonment to insure a better existence and a chance to live a decent and productive life after discharge.

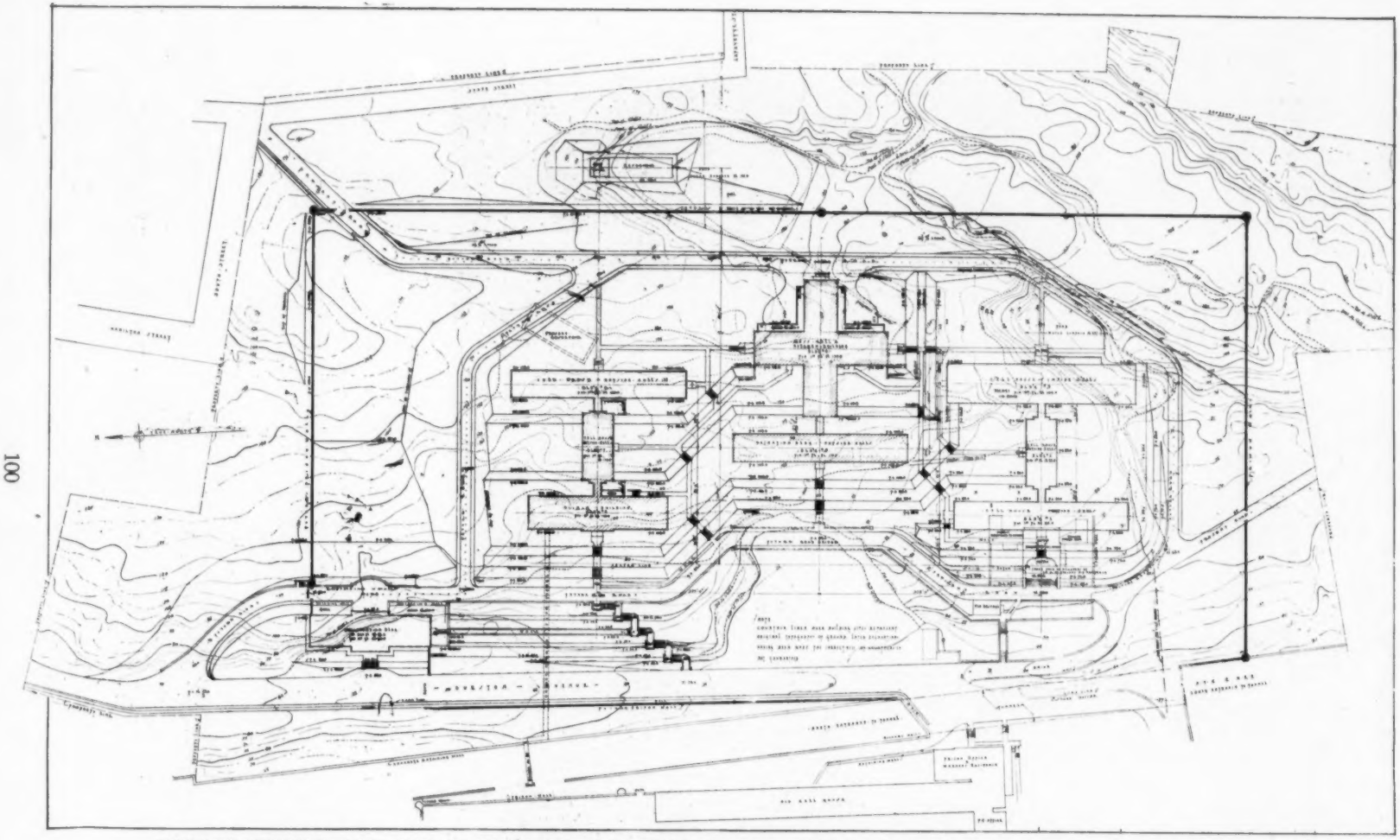
The new Sing Sing, therefore, has been planned as a Classification and Distributing Prison, from which the prisoner, after a definite determination has been made of his mental, physical and economic possibilities, will be assigned to that State institution best suited to his individual demands. For example, if it be found that a prisoner is physically unsound, he will be sent to an institution where he can be therapeutically bettered; or, if mentally deficient, to an institution where he can be scientifically treated, and, if possible, given work that will enable him to direct his minimal capacity so as to exempt him from purely custodial care.

The construction and location of the buildings at Sing Sing mean much more, therefore, than the mere erection of a series of large prison buildings for the detention of those who have violated the laws of the State. It will exist as a twentieth century prison elixir, which will take the recrement of society and so purge and refine it that the result will advance, rather than retard, the onward and upward movement of humanity.

In order fully to understand the problem of prison registration, let us follow the course taken by the convict upon his arrival at the Sing Sing of the future: Immediately upon entering the prison grounds, the Court Officer conducts him to the arrival room in the basement of the Registration Building. Here he is turned over to the prison authorities, who take and receipt for his personal property and clothes. The civilian clothes are removed for disinfection and storage. He is then led to the baths, situated across the hall from the property room. After being thoroughly bathed, and subjected to a hasty medical inspection, clean prison clothes are provided. Then, contagion from outside sources having been removed, the prisoner is lodged in a classification cell on the first floor, to await his turn for examination in the rooms provided for that purpose on the second floor. When the examiner is ready for him, he is taken upstairs to be photographed, weighed, finger-printed and generally Bertillioned, and is then sent across the hall to be given a preliminary examination for the determination of his general physical condition. This over, he is led to the educational examination room, where facts concerning his birth, occupation and general history are recorded, and an examination conducted to determine both the extent of his education and his occupational skill. Following that comes a careful mental examination in which the findings of those just preceding are fully utilized. As a result of these different examinations his first classification is made, subject of course to change from examinations to be conducted later.

Besides containing the general Administration Offices, the Bureau of Registration and the Record Bureau the Registration Building will include a reception room where prisoners may converse with visiting relatives and friends. In the past this problem of a reception room for the visitors to prisoners was a difficult one for prison authorities, as it was practically impossible while allowing prisoners a reasonable amount of freedom for the discussion of private and confidential matters to prevent the transfer of weapons, liquors, drugs and implements of escape. This difficulty, however, we think, has now been successfully solved through the following arrangement: Two parts of a large room are separated by two wire nettings, so placed that they form an enclosed passage six feet in width, where guards can be stationed to prevent any attempt to pass articles to the prisoners without, at the same time, interfering in the carrying on of a conversation.

Adjacent to the Registration Building, and on the same high plateau overlooking the Hudson, is the Temporary Detention Building with cell rooms on



TOPOGRAPHICAL AND BLOCK PLAN OF SING SING CLASSIFICATION PRISON NOW UNDER CONSTRUCTION

The site to be occupied by the new buildings is perhaps the best constituted prison site in the country, overlooking the Hudson—isolated from and yet adjacent the city of Ossining—easily reached from New York by both boat and rail. The terracing of the site has made it possible to give to each building its "place in the sun."

The site of the new development was the scene of Revolutionary activities and the old Arsenal, in which tradition housed the British Officers, is to be restored and kept inside the prison walls—an ever present souvenir to the prisoner of the patriotism of the founders of his country.

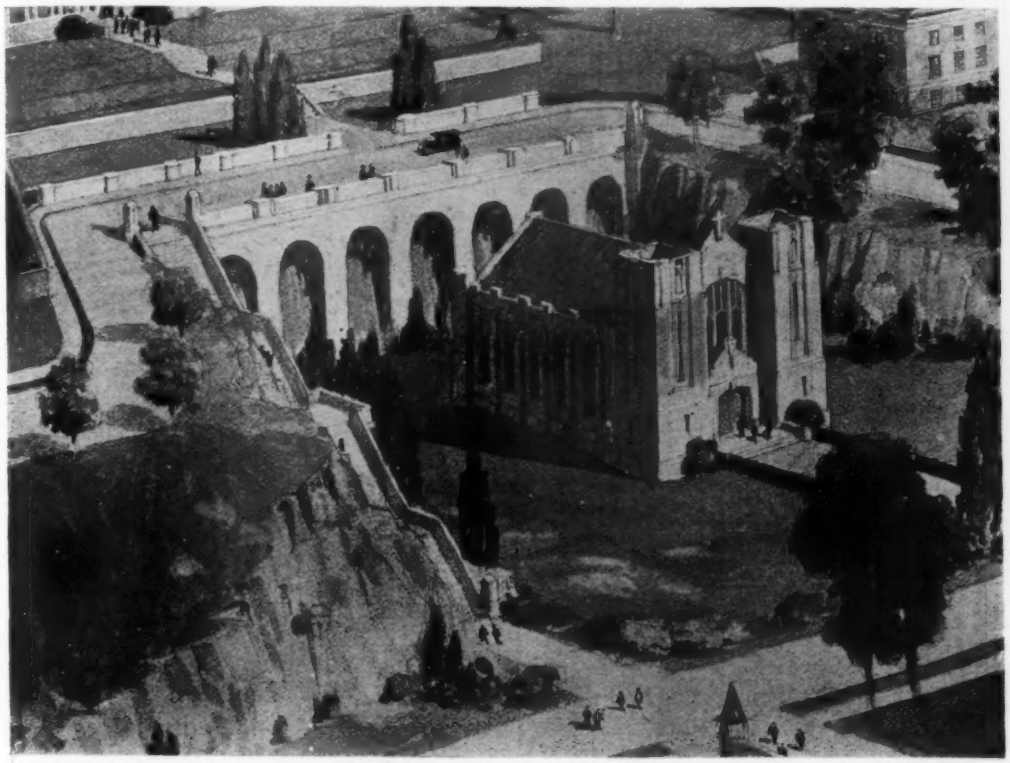
The old prison buildings occupy the area to the West of the N. Y. C. R. R. tracks which appear at the bottom of the cut. The question that all interested in Prison Reform are asking is why the natural advantages of site were overtly overlooked until the present plan was developed.

separate floors, so arranged as to place the prisoners under the constant supervision of the clinical experts, who will conduct their examinations in the adjoining Clinic Building.

The clinical laboratory was developed under a medical commission composed of: Dr. Walter B. James, President of the New York Academy of Medicine; Dr. Charles W. Pilgrim, Chairman, New York State Hospital Commission; Dr. Thomas W. Salmon, Director of the National Committee for Mental Hygiene; Dr. G. H. Kirby, Director of the Psychiatric Institute of the State of New York; Dr. Isham G. Harris, Superintendent of the Brooklyn State Hospital; Dr. Carlos F. MacDonald, Alienist, and Dr. W. F. Brewer, Surgeon. Provision has been made on the first floor for a modern X-ray apparatus and its various accessories; three rooms for the physician in charge of the venereal examinations; a surgical laboratory; rooms fitted for the examinations of the eye, ear and throat, psychiatric and psychological examining room, dental operating room and laboratory, and a laboratory for the use of the staff working in the diagnosis and examination rooms.

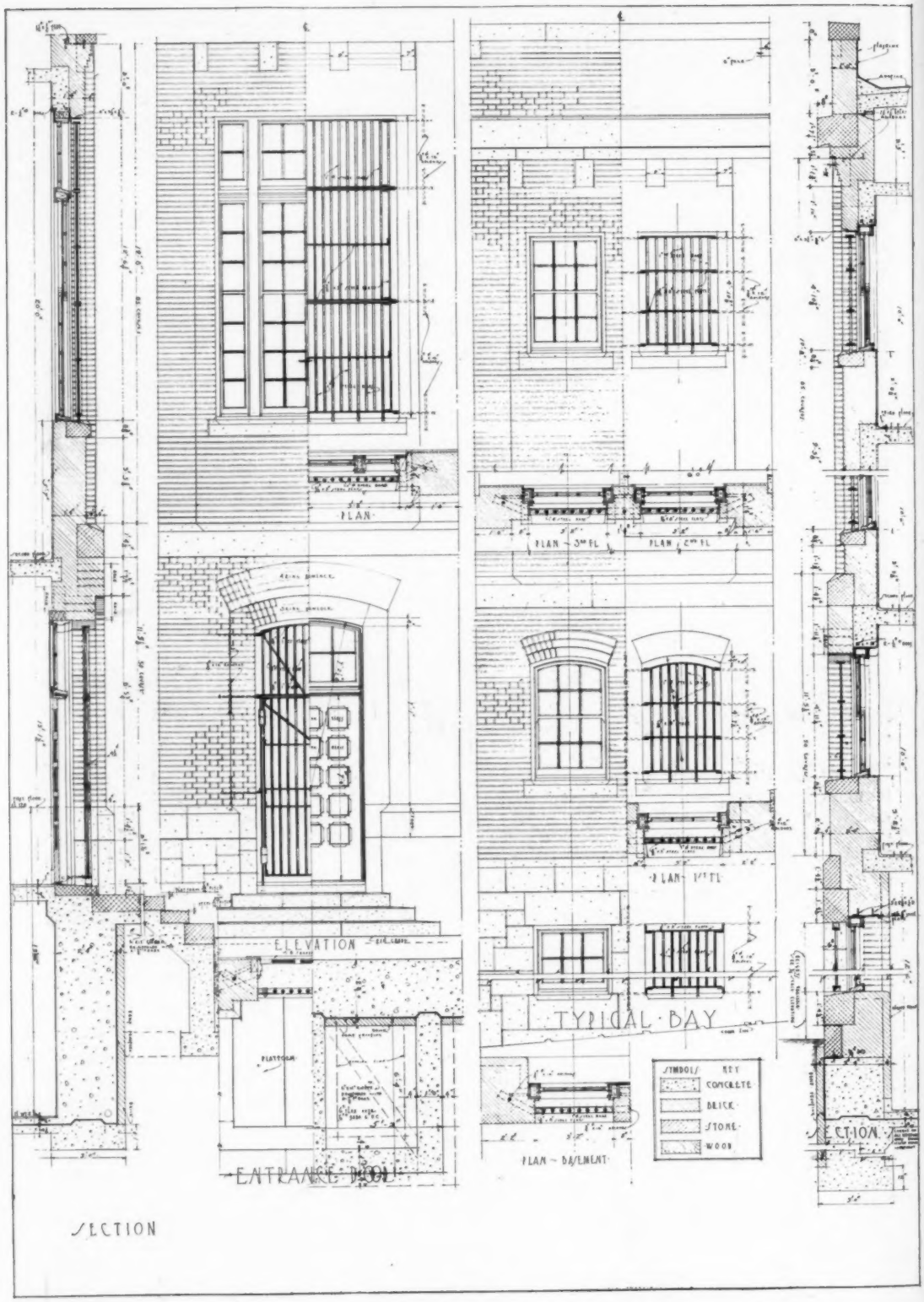
On the second floor is a quantitative and qualitative laboratory; a museum, a recording room, a library and lecture rooms, and on the third floor are surgical wards, subdivided for major and minor operative cases, together with medical wards, so planned as to have ordinary and chronic medical cases in separate divisions. The hospital is to be freely used for detailed observation as well as for treatment.

The fourth floor contains a complete operating department with two operating rooms, one for major and the other for minor operations, each having separate sterilization facilities, together with preparation, etherizing and recovery rooms, while the remainder of the floor is given up to rooms for the male nurses and a convalescent solarium.



THE ARCADE AND CHAPEL, SING SING PRISON
LEWIS F. PILCHER, *NEW YORK STATE ARCHITECT*

In addition to using the building as a clinical hospital for the housing of psychiatric and medical requirements of the prison, it is also planned to use it as a school for the education of male nurses, as it is found that efficiency in prison nursing is directly proportional to the nurse's understanding of the relation of scientific, medical and psychiatric

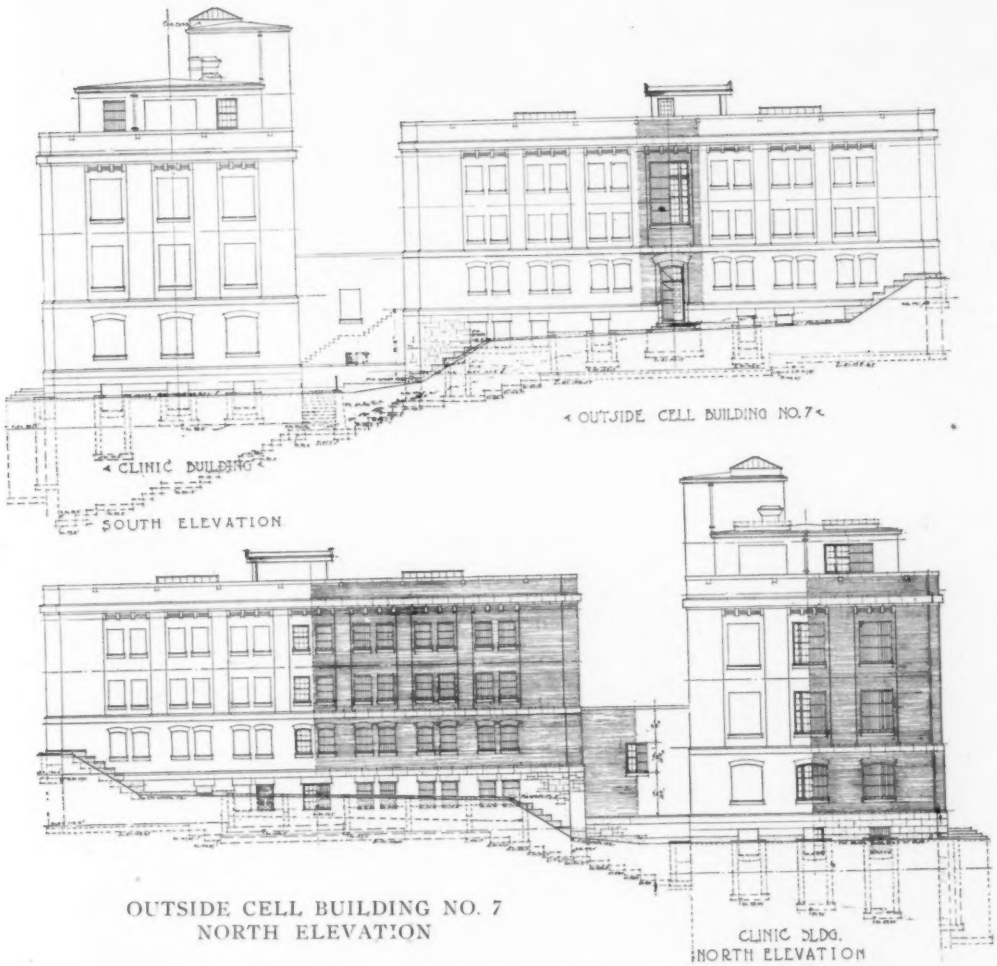


TYPICAL DETAIL OF THE CONSTRUCTION OF ALL BUILDINGS

knowledge to the peculiar problems of a prison community.

To the rear of the plateau, and connected by exterior cell block buildings with the structures just considered, two housing groups have been planned

tutions. In the new Classification Prison a "day-room space" system has been arranged for by which each prisoner is allowed fifty square feet of sleeping space in the dormitory and fifty square feet of space in the day-room. Individual lockers will be



The side elevations show the terracing of the site and the advantages derived from the differences in levels

and constructed in accordance with the interlocking dormitory cell-room type, each having accommodations for three hundred prisoners.

In the past the failure of all dormitory systems has been due to the fact that no provisions were ever made for what is technically known as "day-room space," which is as necessary in prisons as in hospitals for the insane, or in charitable insti-

provided for each prisoner, as it has been determined through former experiments that a sense of individual responsibility is evoked if each prisoner be provided with a separate locker for the safekeeping of such possessions as he may be allowed to have during his incarceration.

Experiments to determine the most efficient method of guarding dormitory prisoners have dem-

FIRST FLOOR PLAN

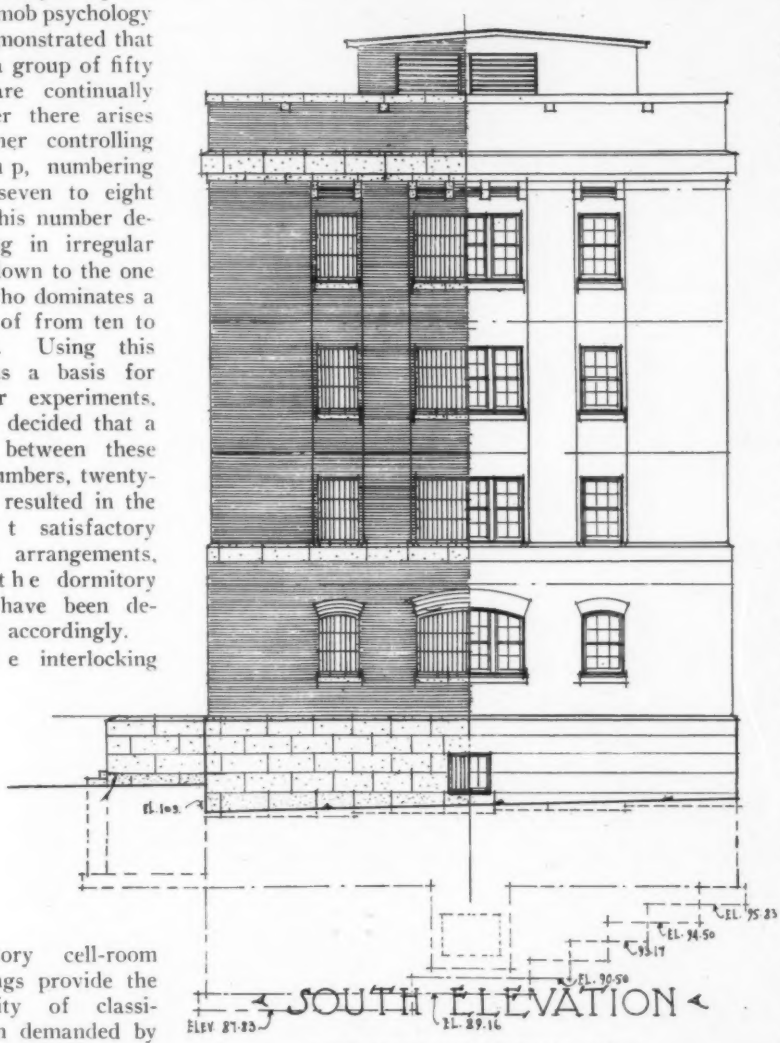
DETENTION BUILDING NO. 5,
SING SING PRISON

Typical floor plan of Detention Building No. 5, a basement and four story outside cell building
This plan shows the arrangement of cells against outside walls which gives to each inmate direct sunlight and air; a vital factor for the moral development and physical condition of the inmates

onstrated the impossibility of a guard stationed on the main floor of a dormitory overseeing all parts of the room. To correct this difficulty an elevated mezzanine guard walk has been planned situated eight feet above the floor proper, and permitting an unobstructed view of all portions of the dormitory.

The study and practice of mob psychology has demonstrated that when a group of fifty men are continually together there arises an inner controlling group, numbering from seven to eight men, this number decreasing in irregular steps down to the one man who dominates a group of from ten to twelve. Using this fact as a basis for further experiments, it was decided that a mean between these two numbers, twenty-seven, resulted in the most satisfactory group arrangements, and the dormitory units have been designed accordingly.

The interlocking dormitory cell-room buildings provide the elasticity of classification demanded by the more advanced penological ideals. Each dormitory building will be three stories in height, and will have two dormitory units, symmetrically placed on each floor, each unit consisting of a day room, lavatory, locker room, and dormitory proper. Access to the dormitory floor is by a central stairway, while the cell room floors are reached from intermediate landings in the main stairway.



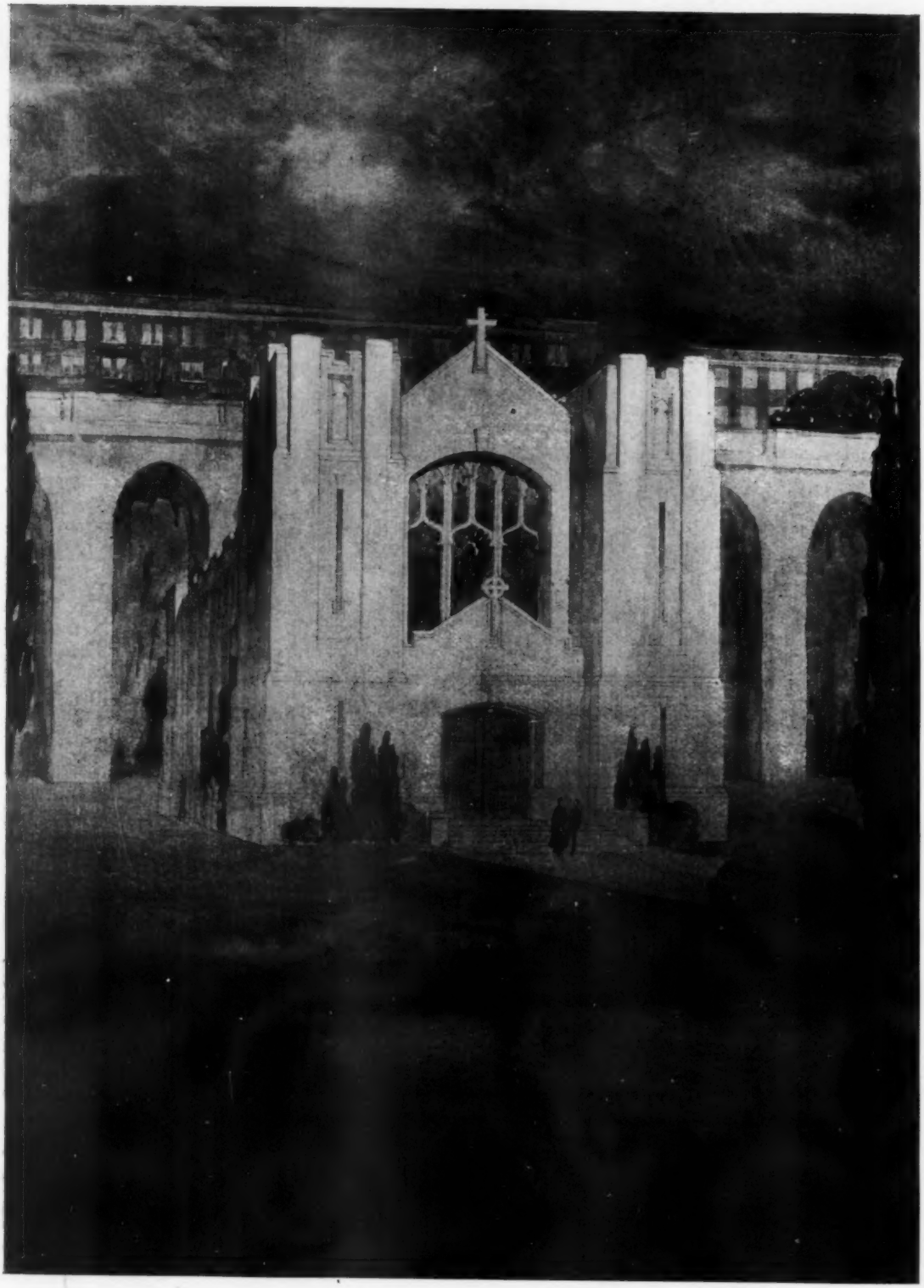
DETENTION BUILDING NO. 5

The entire Sing Sing project includes kitchens, dining rooms, library, school, vocational shops, recreation hall, roads, walks, a modern sewage plant, a power house to heat and light the many buildings and to operate the industrial plants, and a church for the development of religious and community ideals.

In addition to the proper placing and coordination of the structures and their component parts, and the abolishment of unsanitary conditions in the interiors, by the architectural treatment of buildings and site, a great step forward has been taken in the creating of a proper and fitting atmosphere and environment. The old idea of the ugly, heavy barred and broken walls, which produced the dismal, forsaken, isolated and jail-like appearance of former prisons, has been discarded. In their places will be many-windowed, substantial brick structures, extending from the river to the plateau in the rear of the elevated site, in dignified and well-proportioned stages.

The causes which formerly created in prisoners the feeling of being entombed, useless and hopeless exiles have been done away with. It is our hope that ideals of respectability, industry, efficiency and co-operation will arise from these new prison conditions and make strong, beneficial and lasting impressions on the mind of each prisoner.

It is only by such utilization of the experiences in allied fields and their thoughtful application to prison conditions that progress may be hoped for in solving this important human problem.



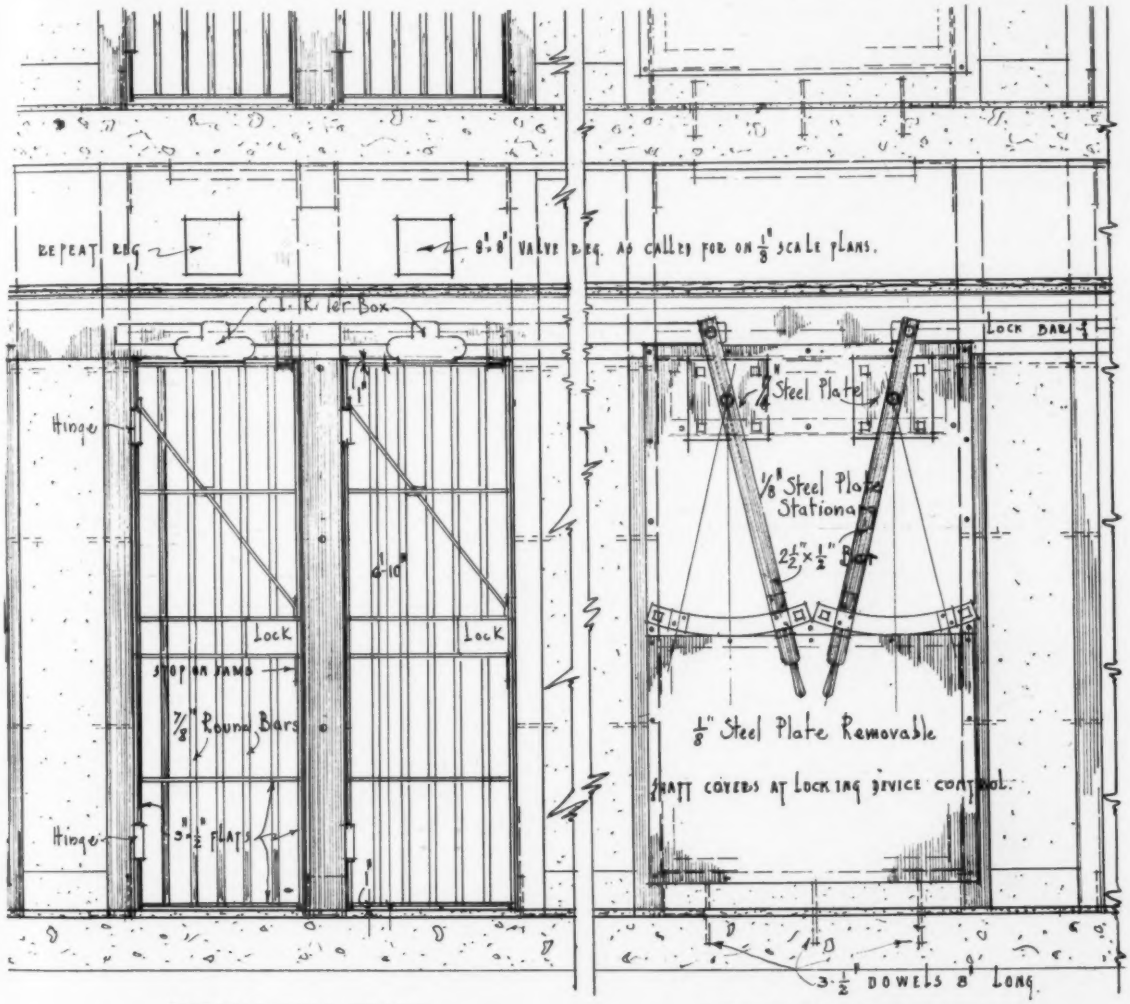
CHAPEL, SING SING PRISON

The Clinic Building at the New Sing Sing Prison

By WALTER B. JAMES, M.D.

IT is many years since men began to realize that their diseases were not the result of a divine purpose, and so they have attempted, first, to understand their origin, through study and analysis, and then from these to discover means of prevention and cure. As a result of these efforts, the prolongation of human life has more than doubled, and the disease and suffering rate has markedly diminished and is still diminishing.

To-day, resignation and patient submission in the presence of disease of the body are no longer virtues. Mental disease has only more recently been looked at from this same viewpoint, and gratifying headway is being made in this direction. The world

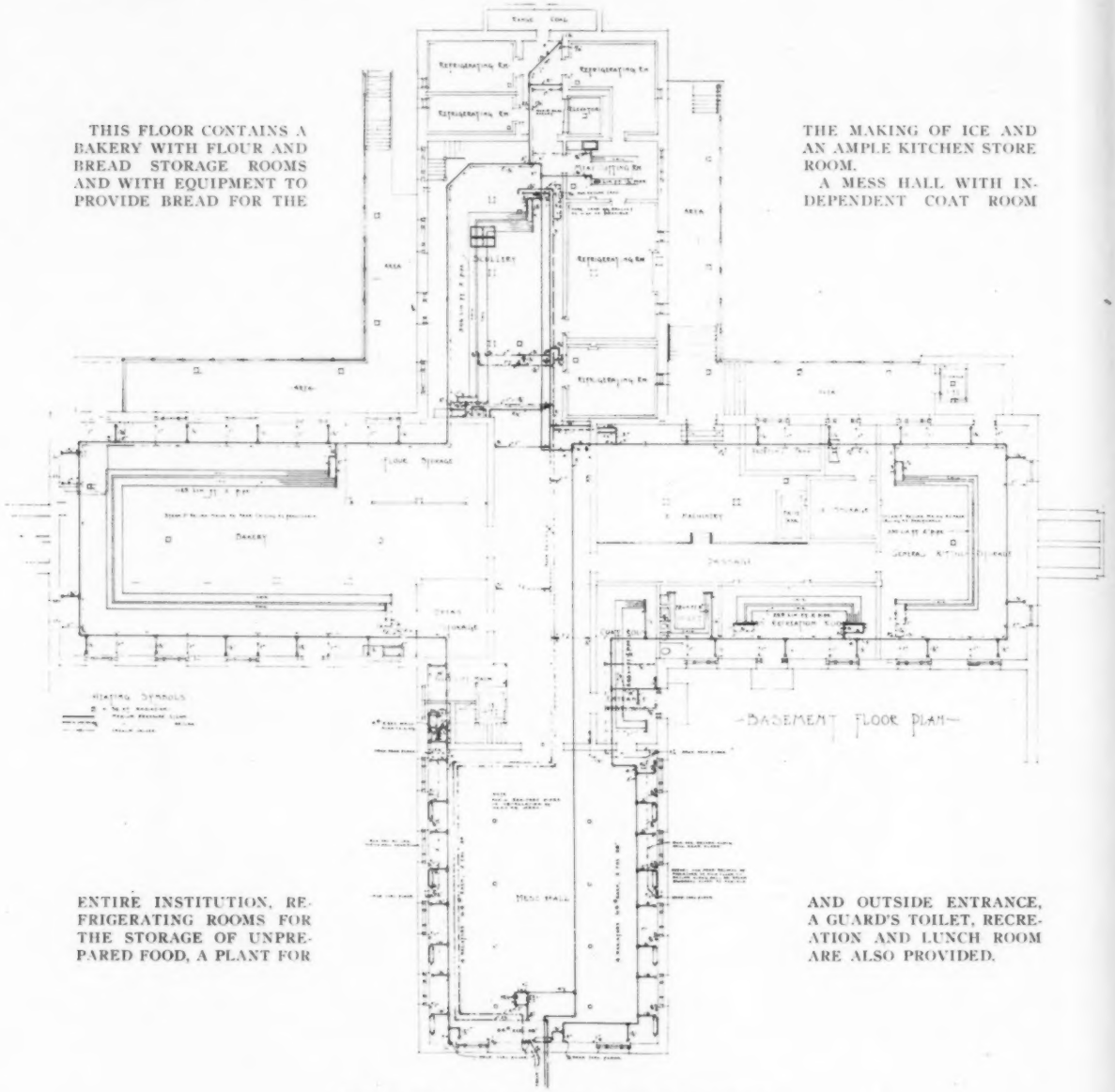


TYPICAL CELL FRONT — LOCKING DEVICE CONTROL

A typical cell front with locking device to hold doors shut while the guard passes down the walk, locks each cell door individually with key and feels assured while he is doing this that he will not be attacked

is just beginning to realize that misbehavior or anti-social behavior presents to society a problem somewhat similar to that of physical and mental disease.

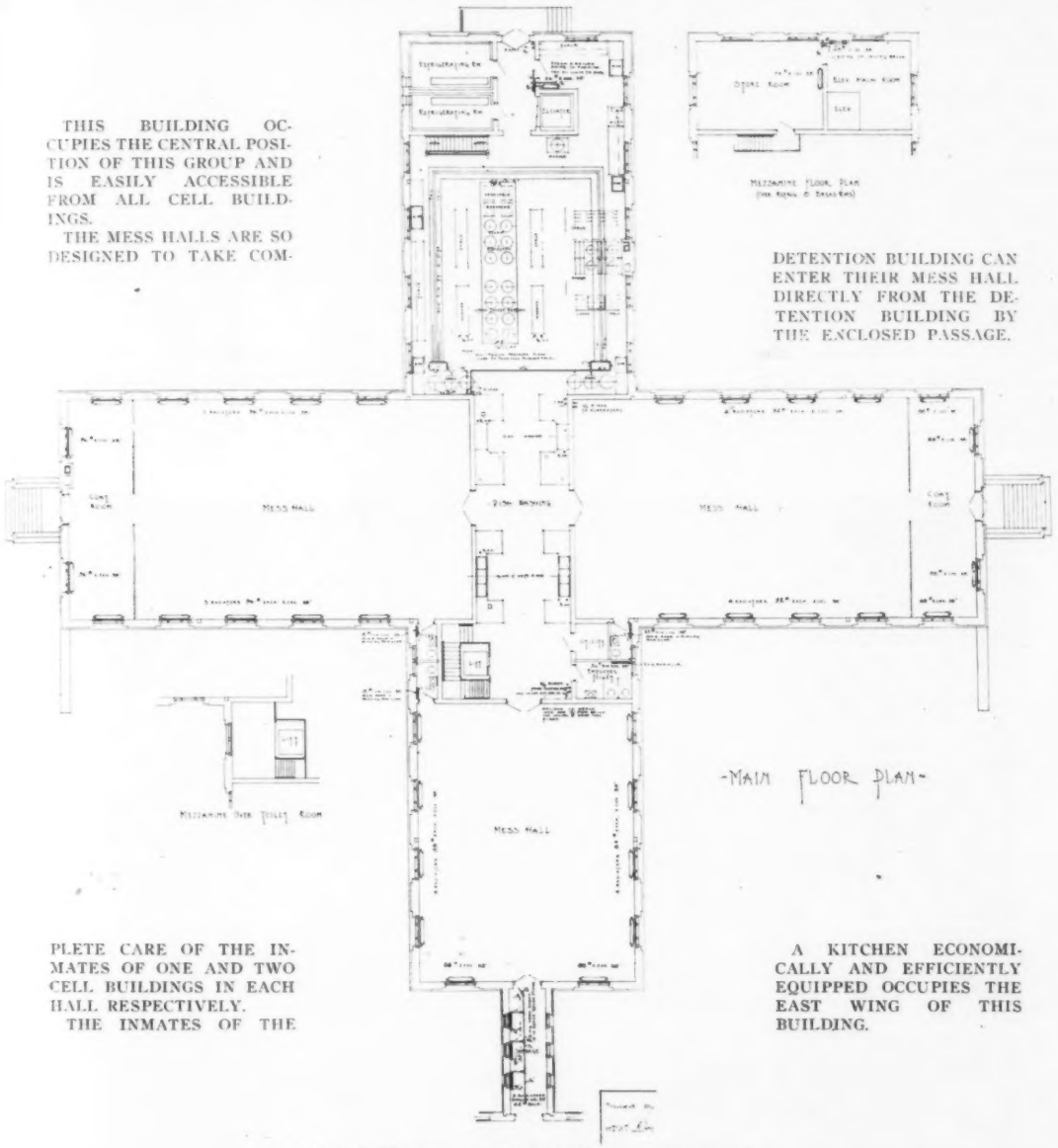
I do not mean that misbehavior is necessarily the result of or associated with disease, either physical or mental, although this is often the case, but that it presents an analogous problem to society, and that it should be attacked in the same manner, that is, through scientific analysis and classification, the discovery of causes, probably very complex, and the application of remedies, probably chiefly preventive, and based upon these causes. Only in this way can it be hoped to turn this costly waste product of social life into a useful by-product.


THIS FLOOR CONTAINS A BAKERY WITH FLOUR AND BREAD STORAGE ROOMS AND WITH EQUIPMENT TO PROVIDE BREAD FOR THE ENTIRE INSTITUTION, REFRIGERATING ROOMS FOR THE STORAGE OF UNPREPARED FOOD, A PLANT FOR THE MAKING OF ICE AND AN AMPLE KITCHEN STORE ROOM.
A MESS HALL WITH INDEPENDENT COAT ROOM AND OUTSIDE ENTRANCE, A GUARD'S TOILET, RECREATION AND LUNCH ROOM ARE ALSO PROVIDED.
BASEMENT FLOOR PLAN

MESS HALL AND KITCHEN BUILDING

When the "Sage Prison Bill" became a law, providing for the demolition of the old Sing Sing cell block and the erection there of a new study, classi-

fication and distributing prison, and creating the "State Commission on New Prisons," New York State committed itself to a new and more intelligent policy toward its offenders and toward the whole problem of misbehavior. The new commission, commanded to carry out the above and other provisions, soon found itself confronted by problems that belonged essentially to modern medical science, and it turned to the "National Committee for Mental Hygiene" for counsel, and an advisory medical committee was formed. About a year before this, realizing the need of a more thorough psychiatric study of criminals along the lines that had been followed so well by Dr. Healy at the Juvenile Detention Home in Chicago, the National Committee had placed Dr. Bernard Glueck in Sing Sing Prison, with the consent and sympathy of the Department of Prisons, to carry out a complete mental analysis of all new admissions.



THIS BUILDING OCCUPIES THE CENTRAL POSITION OF THIS GROUP AND IS EASILY ACCESSIBLE FROM ALL CELL BUILDINGS.

THE MESS HALLS ARE SO DESIGNED TO TAKE COMPLETE CARE OF THE INMATES OF ONE AND TWO CELL BUILDINGS IN EACH HALL RESPECTIVELY.

THE INMATES OF THE DETENTION BUILDING CAN ENTER THEIR MESS HALL DIRECTLY FROM THE DETENTION BUILDING BY THE ENCLOSED PASSAGE.

A KITCHEN ECONOMICALLY AND EFFICIENTLY EQUIPPED OCCUPIES THE EAST WING OF THIS BUILDING.

MESS HALL AND KITCHEN BUILDING

The results of Dr. Glueck's studies have been

published in full in "Mental Hygiene," and elsewhere, and form a valuable foundation for the scientific handling of the mental side of prisoners.

The commission and the state were fortunate in having Mr. Pilcher, the New York State Architect, to translate these ideals into actual construction, and now the completion of an important part of the plans, including the Clinic Building, and, most of all, the final assigning of the contract for the erection, insures the carrying out of this interesting and important project.

Mr. Pilcher has thrown himself into the undertaking with singular diligence and intelligence, and has entered thoroughly into the spirit of modern scientific treatment and research.

The newest and most original feature of the prison is the Clinic Building, in which the study and classification of the prisoners is to take place, and in which, as well, the general medical and surgical work of the institution will be carried on. It provides for the complete physical and mental examination of every inmate. It contains the hospital wards, dispensary, operating rooms and laboratories and X-ray plant, and indeed, it corresponds on a small scale to the hospital of any community, but differs from this in that it assumes that the whole population of the community may be abnormal, and therefore requires that every member of it shall at some time pass through the clinic for purposes of study and analysis. For this reason, the psychiatric or mental division of the clinic is relatively more accentuated.

It requires courage to attack such a problem as this, an attack that may carry us into troublesome social fields. It seems to be a fact, however, that no other method gives promise of relieving society of any considerable part of this burden of suffering and cost. We must not expect ever to be entirely rid of this burden, just as we shall never be rid of the burden of physical and mental disease; but just as science has diminished and is still diminishing these latter, so we have reason to believe that similar scientific methods, properly applied, will diminish the burden of anti-social behavior, and help us to approach the irreducible minimum, a minimum which must probably always exist in a human world like ours, but a minimum from which we are at present still very far.

THE SPORTSMAN

SILK BATIK WALL HANGING, BY ARTHUR CRISP

In order to supply our readers with material of current interest, the news and comment appearing in issues of THE AMERICAN ARCHITECT delayed by the printers' strike will be as of actual rather than stated date of publication.

The Architect's Opportunity

AT the Hotel Sherman in Chicago on March 24 and 25 will be held the first annual meeting of the National Federation of Construction Industries. This Federation was formed for the purpose of extending construction and improving conditions in all the several divisions of the building field. A definite attempt will be made to promote a closer co-operation between architects, engineers, contractors, producers and distributors of materials, realtors, financiers and other construction interests. It is also desired to develop and preserve satisfactory conditions in the relationship of the interdependent elements in the industry to the general public, including the government, labor and consumers. The Federation states the further object of serving as an exchange between and common meeting place for associations representing special building projects. In cases of common interest to the different branches of the construction field in general, the Federation proposes to take the initiative in investigation, policy, propaganda, legislation and in such other ways as will advance this movement. A united organization will, it is hoped, be developed, which will mobilize the entire strength and experience of the various units.

It will be seen from what has been set forth that this meeting will be of fundamental importance to everyone engaged in any aspect of construction. Invitations to be present are extended to every national, regional and local association, and to architects, engineers, manufacturers of supplies and all allied industries.

HERE is presented an opportunity for architects to mingle with the most practical representatives of those allied industries with which it is to their interest to co-operate. Here at the *first* annual meeting of a vitally important and influential organization, the architectural profession may create a precedent. Its members may so participate in the proceedings as to earn recognition among the delegates to the convention as the earnest, capable, farsighted, competent group of men that its practitioners have been striving, and with increasing success, to demonstrate themselves.

Important topics will be discussed. The attitude of architects should, for both personal and impersonal reasons, not be omitted. If the profession is largely represented there will be instilled a certain dignity and unanimity into the meeting that must otherwise be lacking. If architects desire to effect certain reforms, where is a better opportunity afforded than in such a congress, before an open, unprejudiced body of men with only professional ideals before them?

It is therefore urged that architects, individually and collectively, avail themselves of the possibilities of meeting in the forthcoming convention of the National Federation of Construction Industries, of which John C. Frazee, Drexel Building, Philadelphia, is the executive secretary, and learn how far they may aid in the attainment of those very purposes for which they stand.

Developing the Farm Building

TRAINERS of athletes always object to forms of exercise that only develop the body locally. They seek to build up first the entire body, later giving such attention to specific exercises as will increase efficiency in the direction desired.

In the development of a nation or even a municipality these same conditions as to proper growth along proper lines obtain. Possibly there is too close attention to the development of cities and not enough to that of our rural communities. And this lack of interest is beginning to have its effect on the rural communities and particularly the farming sections all over the country.

It has been found to be a grave mistake to infer

that the farming population is not so thoughtful as are those who dwell in large communities. Recent inquiries by the government have disclosed that there is a decided feeling of unrest among the farmers. It has been proven that the farmer is now prepared to assert his right to recognition and will not longer be considered as a group outside of the real activities of our economic and political lives.

The farmer will demand recognition as a large producer and manufacturer and he will not much longer patiently allow others to gamble on and become wealthy in the things he produces. As he grows in importance, as he most certainly will, he will demand for himself and for his family the same opportunities for advancement as are to be availed of by his city-dwelling brethren. He will insist in the future that his house, his farm buildings and his social relations be fully up to every American standard, and knowing that these may only be attained with money, we may expect to feel the effects of a movement on the part of farmers toward securing for themselves a greater share of the profit realized on their product.

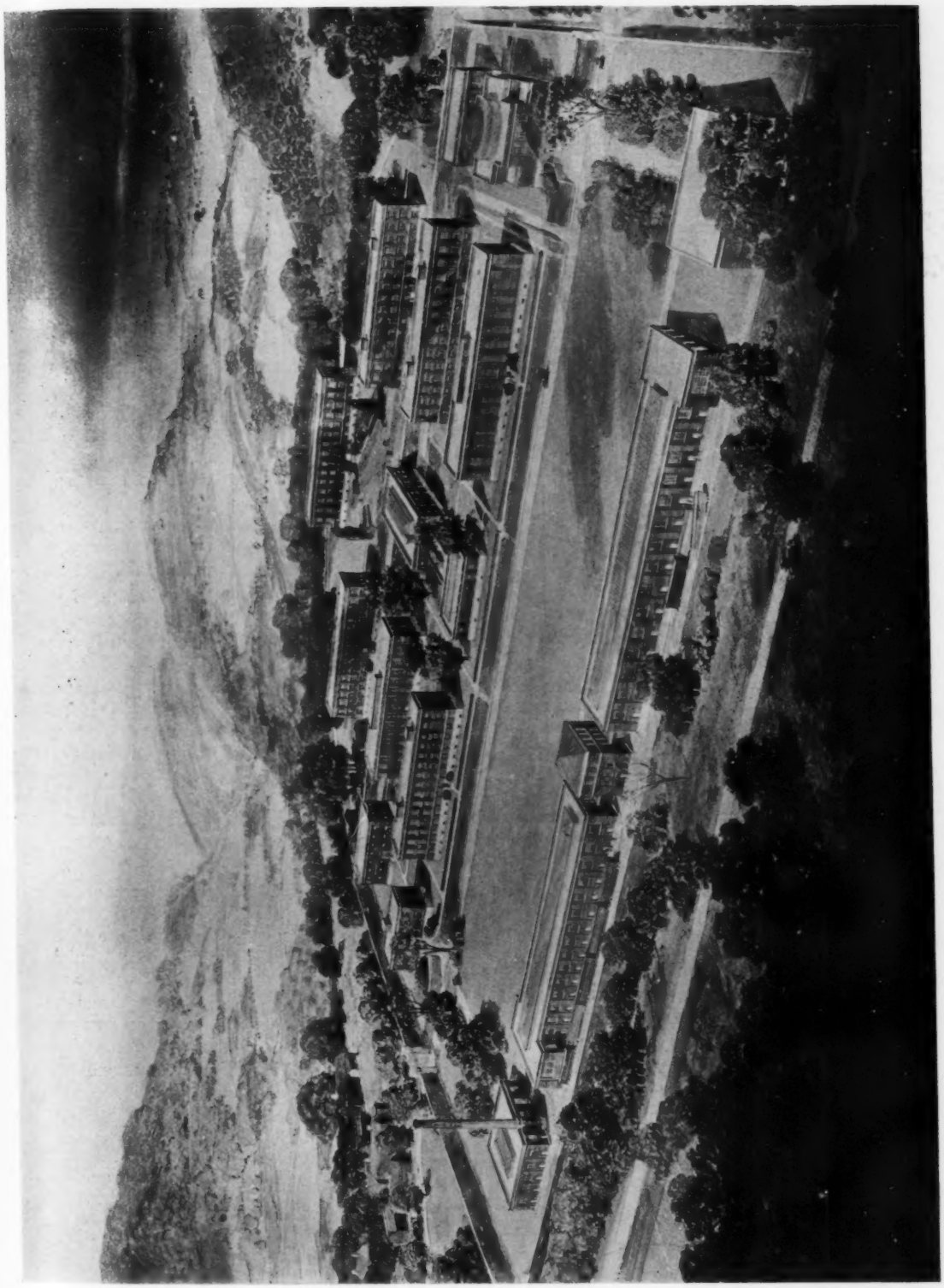
It will not be wise further to ignore either the farmer or the dweller in rural communities. The American Institute of Architects has been quick to endorse and at times enthusiastic in its co-operation with those large undertakings that affect the city. For now more than two years THE AMERICAN ARCHITECT has urged that some closer attention be paid to the farmhouse and its dependent buildings. Owing to the wide-awake spirit of some of the Middle Western delegates to the Nashville Convention, a resolution appointing a sub-committee on farm buildings was passed at that convention. Nothing as far as we are able to learn has come out of that committee.

Recently, announcement was extensively made of a proposed conference on farm buildings. The committee in charge, a large one, did not contain the name of a single architect. THE AMERICAN ARCHITECT directed attention to this omission and was at once assured that an architect would be added to the committee.

No credit may be taken by this journal for the performance of a simple act of duty, but it may be asked if the Institute or other organized bodies of architects may not be considered as properly sharing the responsibility of conserving the rights of architects to recognition.

A SUBURBAN DEVELOPMENT AT HOPEDALE, MASS.

ARTHUR A. SHURTLEFF, *LANDSCAPE ARCHITECT*



GENERAL VIEW, WINGDALE PRISON
LEWIS F. PILCHER, *NEW YORK STATE ARCHITECT*

The Wingdale Prison Site

By Lewis F. Pilcher, *New York State Architect*

THE more advanced of the modern penologists are rapidly discarding the old theory that a certain humanity and kindliness should be eliminated from society's dealings with its less responsible citizens. They are substituting in its place the idea that the majority of criminals are not inherently bad, but, lacking the idealistic principles of good citizenship which result from environment and education, are only wayward.

If we accept this new theory, and make negligible the assumption that most criminals have inherited a tendency toward wrong-doing, it becomes necessary for us to revise many of our ideas concerning the government, discipline and housing of prisoners, and to acquire an impressionable quality of mind susceptible to new theories and experiments which concern the welfare and advancement of our less fortunate fellow men.

With all these things in mind, and with the desire to do our part in ameliorating prison government, the Commission on New Prisons has endeavored, in the building of the Wingdale Prison, to achieve a good architectural result combined with these essential reforms. In order that these aims may be fully understood, I shall attempt to explain both the architectural plan of this new prison and the reasons for selecting a sloping rather than a level topographical site.

If one surveys the history of civilization and investigates the growth and final results of the structural plan of either religious or civil communities, it is at once apparent that the final housing scheme of any given settlement is determined by the topography of the region in which that settlement is located.

For example, the study of the settlements of antiquity shows that the higher locations were universally chosen as the sites of palaces and temples, and that where the configuration of land did not permit of such natural elevation, mounds or raised crepidomas were constructed, in order that by means of the terraced elevations a distinction might be made between the different degrees of religious prominence.

That the Egyptians who inhabited the level areas of the alluvial Nile appreciated the psychological effect of such terraced elevation is shown by the architectural arrangement of their temples. To emphasize the hieratic mysteries, the worshiper was led from a pyloned gateway into an atrium with a pavement slightly graded above the level of the dromos. This atrium, open as it was to the effects of the brilliant Egyptian atmosphere, offered a subtle psychic preparation for that elation of soul which stimulated the novitiate when, after ascending the steps on the far side of the atrium, he entered the sombre shadow of the hypostyle hall. This elation increased in many cases to a religious ecstasy when the novitiate ascended from the far side of the hypostyle hall into the upper region where the esoteric mysteries were performed.

A simpler expression of this religious constructive arrangement may be seen in the Temple of Kohn. Here the priestcraft developed a form of temple construction which crystallized all the associative imagery of man and reflected in its different stages of elevation of the various sections the relevant distinctions of class and the progress of humanity toward its idealistic goal.

Thus in the low grade level of the atrium the light, the air, and freedom of movement suggested that lack of function and freedom from formal life which exists among the multitudes; the conscious effort of ascent in walking from the atrium to the hypostyle hall suggested the difficulties of rising from a lower to a higher social order, while the further ascent to the small, calm and dimly illuminated holy-of-holies symbolized the fact that only through struggle, loneliness and pain may a devout one hope to attain the quiet and sublime dwelling place of the gods.

When the Greeks rose to intellectual and artistic position they evolved the Greek form of temple, which was simply an Hellenic translation, through the medium of the Mosaic temple, of the Egyptian hieratic imagery. Perhaps the most typical of these temples is the great marble Parthenon (438 B. C.) which was reared upon a three-stepped crepidoma, a worthy stylobate support, a marvelous peristyle, reminiscent of the open air atrium of its Egyptian prototype. Further on, and beyond the peripteros, and at a higher level, the pronaos led through a great door into the shrine chamber of Athena. Thus did the architects, Ictinus and Callicrates, express in much the same manner as the Egyptians the essence of crystallized human experience.

In the flat country of Mesopotamia the architects built lofty zekkurats in order to provide high

substructures for the crowning cella or shrine, and these lofty, temple-capped pyramids had a materialistic as well as a spiritual value in that they helped to form in the minds of the people an ideal as to the position in the community of both temporal and spiritual power.

To the north, at Khorsabad, a city of Assyria, the rulers constructed, as part of the great wall, an enormous plateau. This artificial mound, towering as it did some sixty feet above the level of the city, was used as a place of residence for the king and his court, while back of it, and so high that it bathed the plateau with its shadows, was constructed the many-stepped, cella-crowned temple of the priests. Thus religion looked down upon royalty and royalty, in turn, on its walled city with its level streets and multitudinous inhabitants, and thus in this segregated and self-sufficient community a natural and unwitting psychological arrangement of class housing was worked out by these early architects.

This same community phenomenon which we have noted in the Orient existed at the same time at Mycenae, Thyrns, Argos, Attica and Rome,—the heights being always occupied by the rulers, the foot-hills by the nobles and the adjacent plains by the people.

By these few examples taken from the religious and civil architecture of early civilization I have endeavored to show that class distinction tends to express itself through the use of different housing levels, the height of each group being directly proportional to the power of its social division, thus giving a concrete expression to the theoretical grades by which the human mind differentiates the social status of the people who comprise any given group.

If we apply this rather pragmatic psychology to the problem of planning a new prison, we find it obvious at the outset that a prison population forms, together with its dependencies, a complete segregated community and therefore presents few phases which have not been successfully solved in the various treatments of community houses in past eras. Bearing in mind both this and the psychological principles which determine the function of any segregated community, it becomes perfectly clear that the old system of plotting an entire prison plan on an absolutely level piece of ground does not agree with either the teachings of history or the psychological principles which determine the site of community housing, and it thus becomes manifest that if we are to plan a prison which will be both a protection and a benefit to society we must select our site and construct our plans with the idea of having different grades of elevation for different degrees of social eminence.

If, remembering this, we summon practical experience to our aid we find that a prison population divides itself naturally into three major divisions, two of which are composed of actual inmates and a third of those in authority over them. The first and largest of these groups is made up of subnormals and general recalcitrants who of necessity must work, eat, and sleep under constant and direct supervision. These will be confined in strong, well-guarded buildings situated within a walled enclosure and the work which they do will be such as can be efficiently done within the comparatively small space to which they are restricted.

The second group, composed of prisoners who have shown themselves worthy of trust, will be allowed privileges which are denied the first. A concrete expression of these privileges will consist of lodging them in buildings situated on a higher level and with no enclosing walls, thus allowing them to carry on dairying, farming, stone crushing and similar industries.

As the working out of our community idea demands that the governing class occupy a higher site than those they govern, we have planned an adjacent but higher elevation for the offices, dwellings and other buildings necessary for the proper maintenance of a model prison.

In our plan for the new Wingdale Prison we have attempted to express a prison which will meet the scientific and historic precedents which we have at our command, and we fully believe that our plan will exert as beneficial an influence on our prisoners as did the noble monuments on the Acropolis at Athens on the humble people who constructed their mud-brick houses at its base.

DRUG AND CHEMICAL FACTORY OF MESSRS. BURGOYNE, BURBIDGES & CO., EAST HAM

MESSRS. SEARLE & SEARLE, *ARCHITECTS*

Factory Design in England

IN this issue there are illustrated a number of the examples of the work of Messrs. S. Cecil Searle, A. R. I. B. A. and Norman O. Searle, A. R. I. B. A., who form the architectural firm of Searle & Searle of London, England.

In presenting these interesting examples of factory construction it is worth while to comment on the fact that this firm has a history dating back for more than eighty years and the present members are of the third generation of its founders. While these old associations are by no means rare in England they are almost if not entirely unknown in the United States.

There undoubtedly is a very large measure of satisfaction in a relationship between architect and client, one that has been preserved from generation to generation. In some instances it is not unusual to find that there has been a close relationship between architects and clients extending over periods of almost forty years. In the case of some of the work illustrated in this issue, the architects have joined with their clients at the very beginning of the client's business career, and as the business has prospered they have, bit by bit, unit by unit, added to the buildings required until vast plants covering large areas mark the co-operation and secure the fulfillment of architectural coherency that is so marked in this class of building and so utterly lacking in similar types in this country.

Such very favorable relations will undoubtedly inspire an architect to his very best efforts.

An interesting feature of Messrs. Searle & Searle's work illustrated is the Brantham Village Hall. We need a building of this type in every small town in this country. Nothing can more encourage a true commercial spirit than the availability of similar buildings as a place where townspeople may meet to discuss their problems, celebrate an occasion or socially mingle.

The architects, in very kindly placing at our disposal this group of interesting work, write as to this hall as follows:

BRANTHAM VILLAGE HALL,
NEAR MANNINGTREE, ESSEX, ENGLAND
MESSRS. SEARLE & SEARLE, *ARCHITECTS*

The Brantham Village Hall

THIS building is erected in the village of Brantham, Suffolk, to the designs of Messrs. Searle & Searle, architects, for C. P. Merriam, Esq., J. P.

Two entrance porches give direct access from the road to the hall, the size of which is 24 feet wide and 45 feet long. The hall is well lighted at the sides and north end by large windows having steel casements and lead lights in diamond panes. The special features in the hall are the massive piers between the windows, carried out in light red brindled bricks pointed with a white joint, and the roof, which is constructed with open timber trusses with curved braces to collars and purlins, oak sole pieces and carved brackets.

At the south end there is a raised platform 3 feet above the floor of the hall and approached by steps at each side.

Cloak rooms and lavatory accommodation for both sexes are provided as shown on the plan, with a connecting corridor at the back of the platform. The cloak rooms give access to the platform and form convenient dressing rooms for dramatic entertainments. From the platform level a staircase descends to a side entrance to the road and to the basement, which extends under the whole of the southern block, and contains kitchen, with copper and sink, larder, heating and fuel chambers and a large chair store. Convenient openings are provided between the basement under the platform and the main hall, to allow refreshments, chairs, etc., to be passed through.

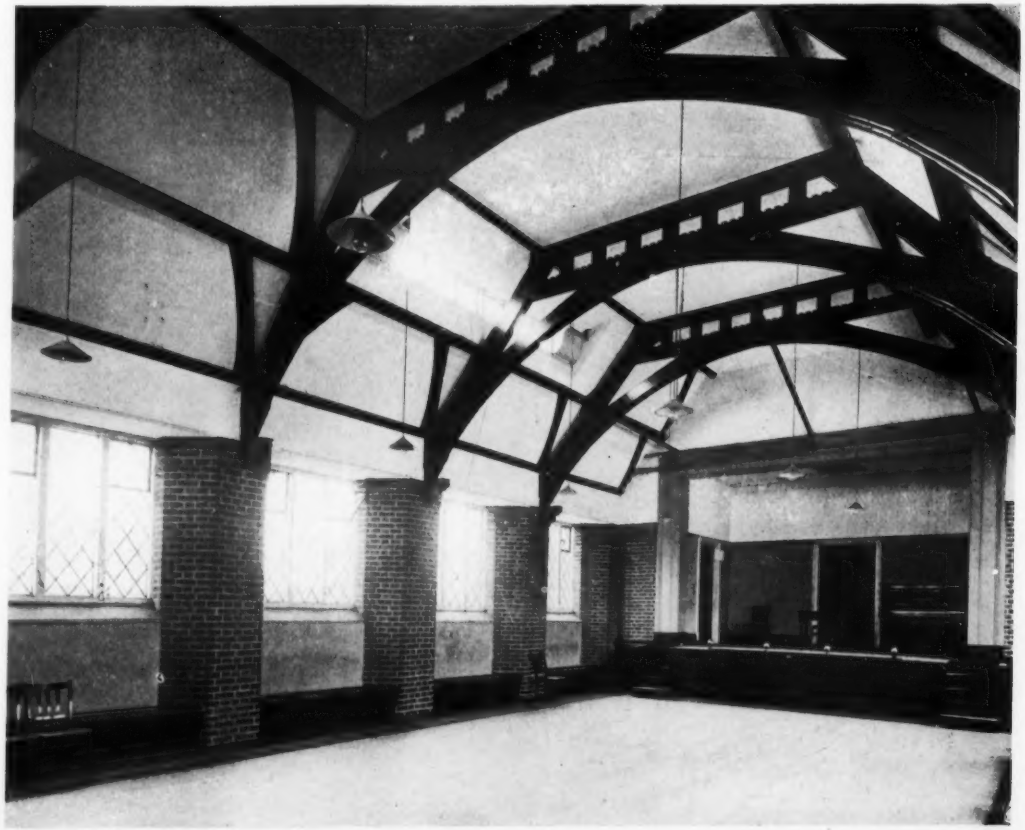
Heating is by hot water in 4 in. main pipes carried in channels with open gratings in the floor of the hall, and by radiators in the porches, cloak rooms, etc. The main boiler is in the basement. Lighting is by electricity. Footlights are provided for the platform.

The floor of the hall is laid with narrow yellow deal tongued batten flooring carried on floor joists and sleeper walls. The floor over basement is of reinforced concrete, with ideal floor to platform and cloak rooms and granolithic finish to lavatories, corridor, etc.

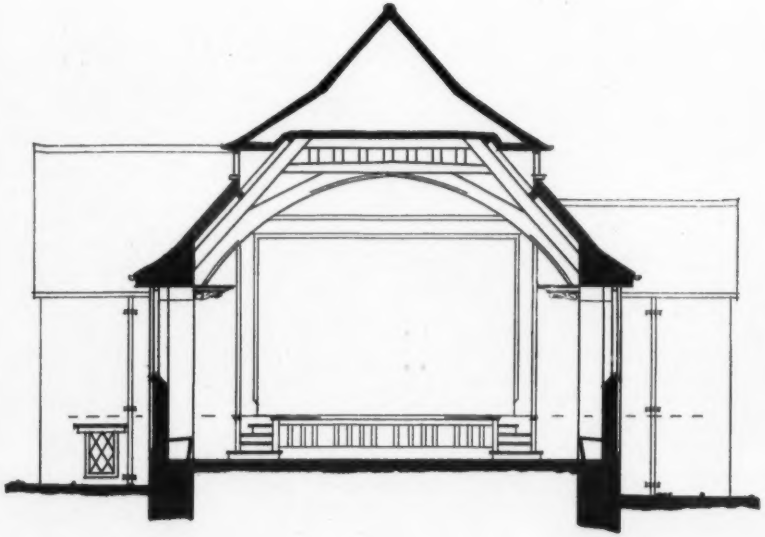
Seating accommodation is by chairs, and seats are formed between the windows. These lift up to form lockers in which can be kept chess boards, draughts and other games.

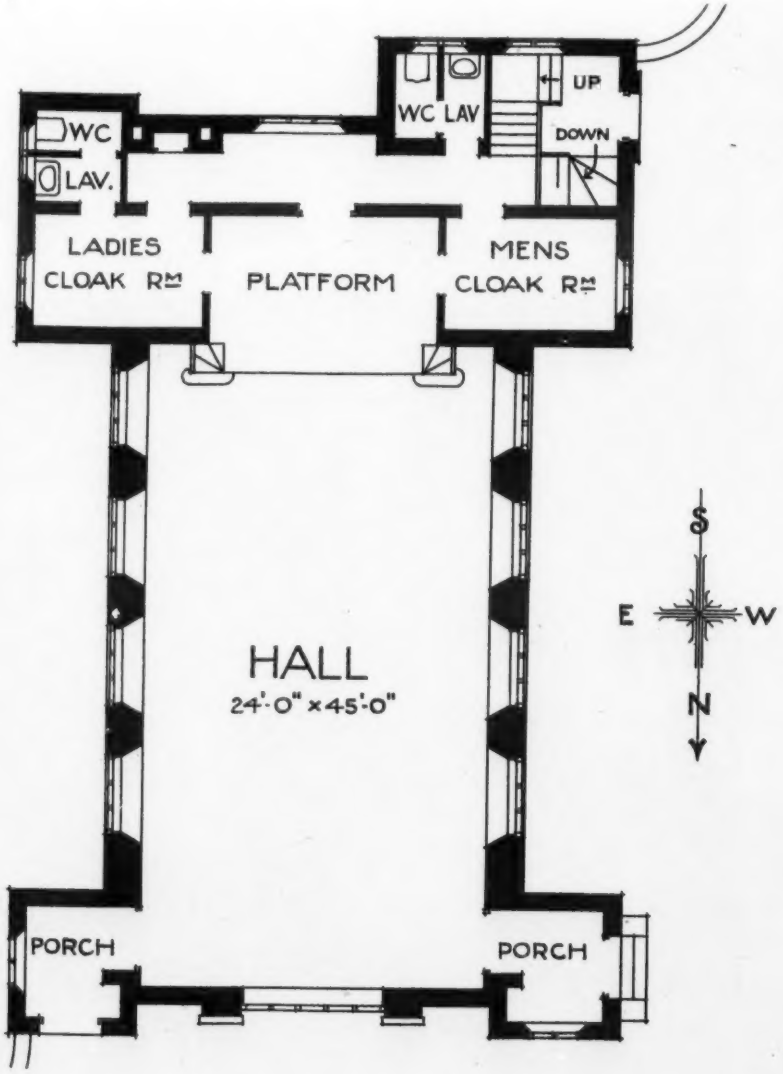
Externally the walls are faced with brindled red bricks, with cement plastered gables and panels under hall windows. Roofs are covered with sand-faced hand-made Suffolk tiles.

The cost of the building amounted to just over $7,500.



INTERIOR VIEW, BRANTHAM VILLAGE HALL, NEAR MANNINGTREE, ESSEX, ENGLAND
MESSRS. SEARLE & SEARLE, *ARCHITECTS*





BRANTHAM VILLAGE HALL,
NEAR MANNINGTREE, ESSEX, ENGLAND

MESSRS. SEARLE & SEARLE, *ARCHITECTS*

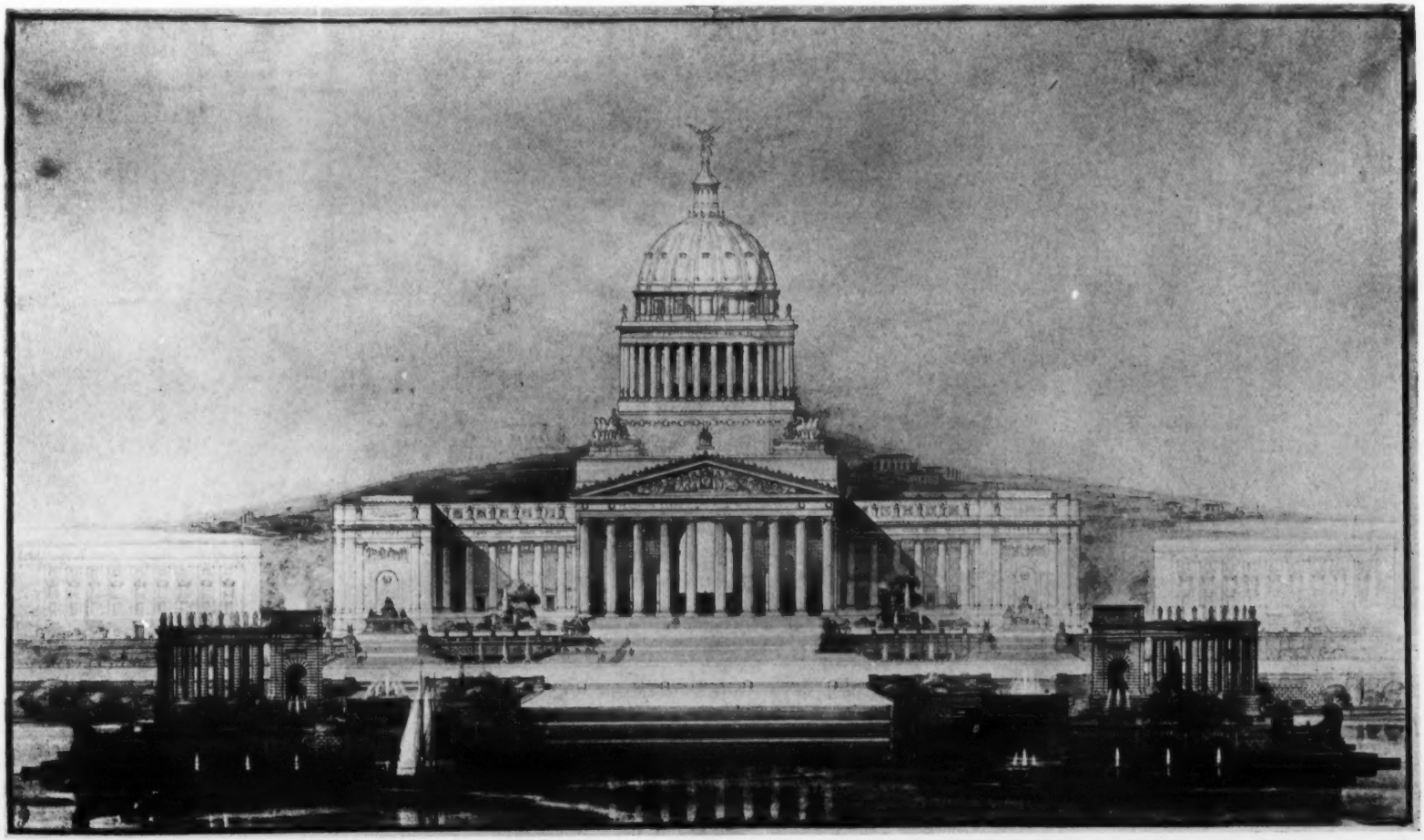
CORNER OF THE FACTORY GROUP OF THE BRITISH XYLONITE CO., LTD., HALE END, LONDON, ENGLAND
MESSRS. SEARLE & SEARLE, *ARCHITECTS*

BRANTHAM, A PIONEER WORKMAN'S VILLAGE, BUILT FOR THE BRITISH XYLONITE CO., NEAR MANNINGTREE, ESSEX, ENGLAND

MESSRS. SEARLE & SEARLE, *ARCHITECTS*

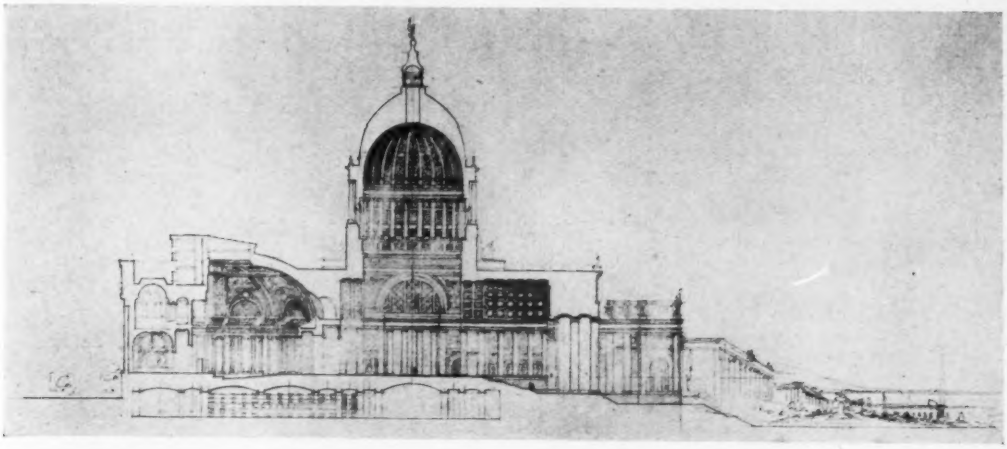
MAIN ELEVATION, OPTICAL WORKS, MESSRS. ROSS, LTD.
CLAPHAM COMMON, LONDON, ENGLAND

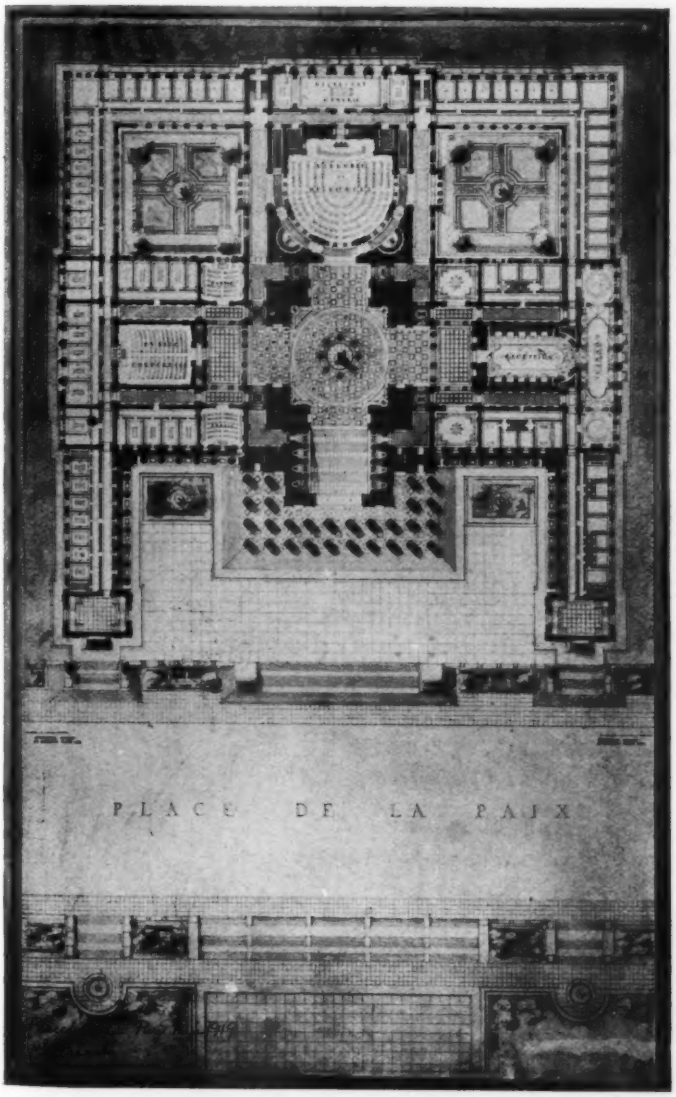
MESSRS. SEARLE & SEARLE, *ARCHITECTS*



CAPITOL BUILDING OF THE LEAGUE OF NATIONS.
TWELFTH PARIS PRIZE, FINAL COMPETITION

SECOND PRIZE DESIGN, SUBMITTED BY D. McLACHLAN, JR., ATELIER HIRONS, NEW YORK
SOCIETY OF BEAUX-ARTS ARCHITECTS





SECOND PRIZE DESIGN

SUBMITTED BY

D. McLACHLAN, JR.,
ATELIER HIRONS, NEW YORK

TWELFTH PARIS PRIZE

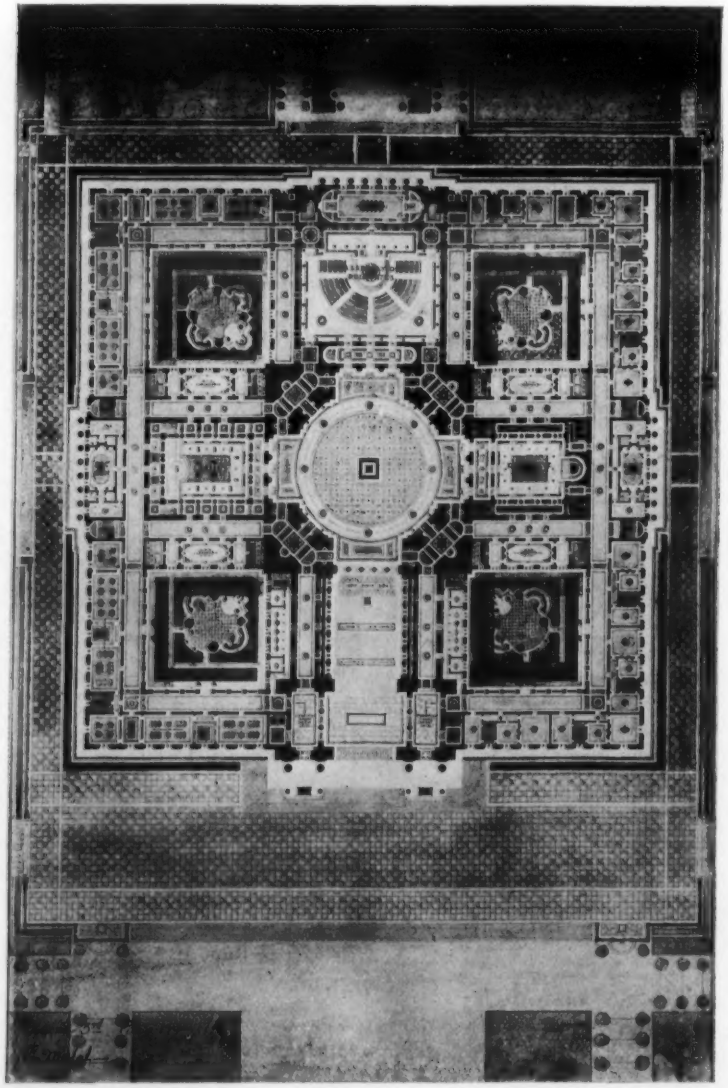
FINAL COMPETITION

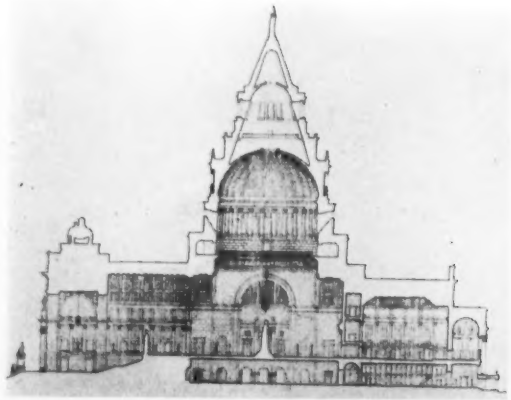
CAPITOL BUILDING OF THE LEAGUE OF NATIONS

SOCIETY OF BEAUX-ARTS ARCHITECTS

TWELFTH PARIS PRIZE, FINAL COMPETITION

THIRD PRIZE DESIGN, SUBMITTED BY
L. FENTNOR, ATELIER WYNCOOP, NEW YORK
SOCIETY OF BEAUX-ARTS ARCHITECTS





THIRD PRIZE DESIGN

SUBMITTED BY

L. FENTNOR,

ATELIER WYNCOOP, NEW YORK

TWELFTH PARIS PRIZE, FINAL COMPETITION

CAPITOL BUILDING OF THE LEAGUE OF NATIONS

SOCIETY OF BEAUX-ARTS ARCHITECTS

Society of Beaux-Arts Architects

Official Notification of Awards, Judgment of November 24th, 1919, Final Competition for the 12th Paris Prize of the Society of Beaux-Arts Architects

PROGRAM

The Paris Prize Committee proposes as subject of this Competition:

"The Capitol Building of the League of Nations."

The Committee proposes as the problem of this first after-war Paris Prize the architectural expression of the ideal of the League of Nations as it would be exemplified in a building, which shall be the Capitol of this League.

For the purpose of the program, it is to be supposed that the League, in its final operative form, consists of:

An Executive Council of nine members; one appointed by each of the five great Nations and four elected by the Assembly of Delegates. In the Executive Council is vested the Supreme Executive authority of the League. It meets at frequent intervals and is analogous in its functions to the English Cabinet or the President and his Cabinet in our Government.

An Assembly of Delegates of 150 members. Each member nation of the League appoints three delegates to this Assembly, in which is vested the legislative and judicial powers of the League, subject only to certain veto rights of the Executive Council. It meets at stated intervals or on calls of the Executive Council, and is somewhat similar to our Congress, the English House of Parliament or the French Chambre des Deputies.

The Secretariat. The Secretariat is that part of the machinery of the League which has for its duties the keeping of all its records. With it are filed all treaties, agreements and records. It compiles such data and furnishes such information as it may be directed to do by the Council or Assembly. At its head is the Secretary General, a permanent official appointed by the Executive Council. He also acts as presiding officer of the Council and of the Assembly. This department would have a permanent staff of 300 or 400 members, experts and authorities, besides representatives appointed by various nations to consider general subjects or Committees appointed by the Council or Assembly to investigate and report on particular branches of their legislative or judicial work. No analogy for this department is apparent in our Government. Its head, the Secretary General, is a presiding officer only, without power, except as such may be delegated to him by the Council or Assembly, he, in his department houses, committees or conferences recording their findings and furnishing them information. He is the international clearing house for information.

This may be considered an outline of those functions which it is proposed to house in the main Capitol Building of the League of the Nations.

In conformity with the ideals which created the League, a small territory, similar to the District of Columbia, has been internationalized; a meeting place of all nations in the common search for justice to all. It is a rolling country on an inland lake. There is to be the city of the Nations, with its national embassies or offices, with its international bureaus or departments and its Capitol Building of the League of the Nations.

The main building only is the subject of this problem, and in it are to be housed the Executive Council, the Assembly of Delegates and the Secretariat. Below is a list of these requirements which are obligatory. This list is not intended to be inclusive of all. What additions to it, how arranged, or in what setting is for the vision and imagination of each competitor to determine. The building houses more than a series of offices—it houses an ideal, an aspiration of mankind.

Requirements:

(a) Hall of the Executive Council.

(b) Suite of offices for each member of Executive Council.

(c) Hall of the Assembly of Delegates.

(d) Suite of offices of Secretary General.

(e) Twenty or thirty Conference or Committee rooms, of which two or three should be of sufficient size to admit of the presence of the public.

(f) Suites of offices for Secretariat force.

(g) Archives for 1,000,000 volumes.

The greatest dimension of the building shall not exceed 500'-0".

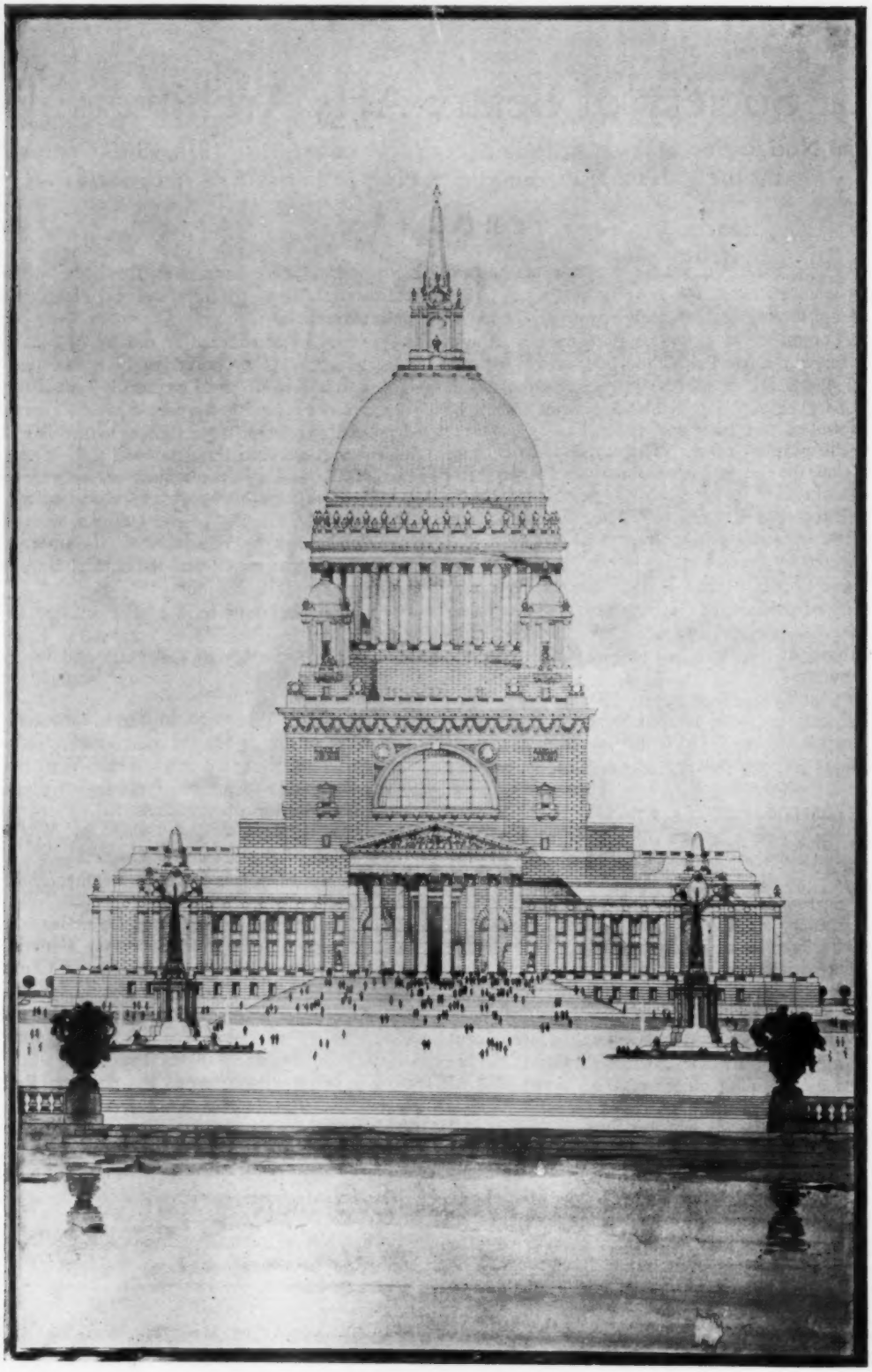
Jury of Award: Lloyd Warren, F. A. Godley, R. M. Hood, L. F. Peck, W. S. Wagner, M. J. Schiavoni and R. H. Dana, Jr.

Number of drawings submitted: 6.

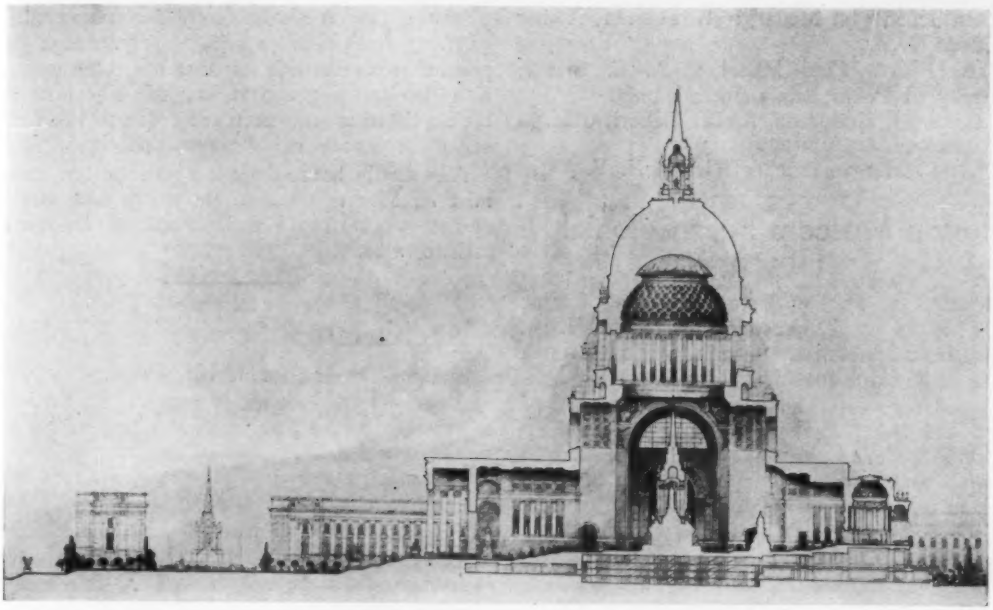
Awards:

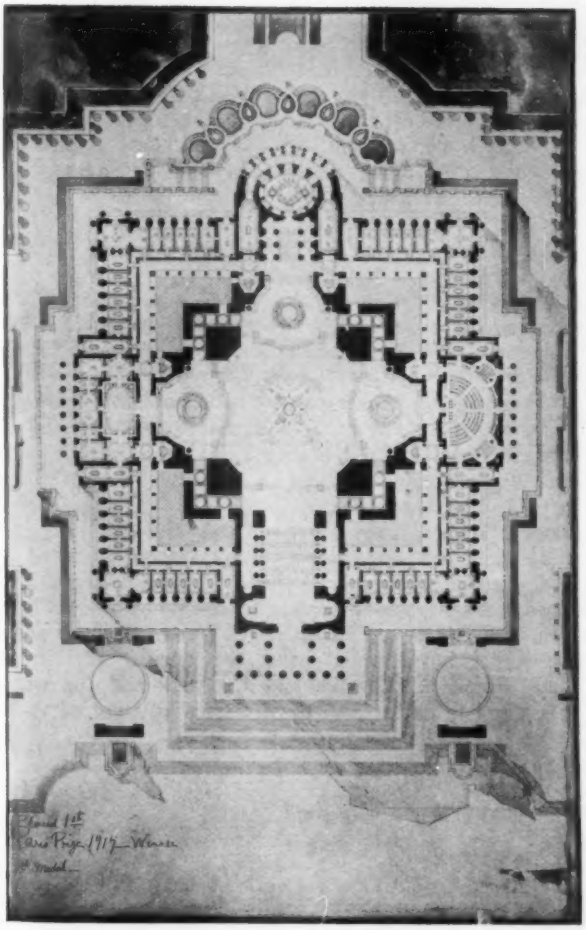
Paris Prize Winner (1st Medal): E. E. Weihe, Atelier A. Brown, Jr., S. F. A. C., San Francisco. Patrons: Messrs. A. Brown, Jr., H. W. Corbett and M. Prevot.

Placed Second (1st Medal): D. McLachlan Jr., Atelier Hirons, N. Y.



CAPITOL BUILDING OF THE LEAGUE OF NATIONS
TWELFTH PARIS PRIZE. FINAL COMPETITION
PRIZE WINNING DESIGN, SUBMITTED BY
E. E. WEIHE, ATELIER A. BROWN, JR., SAN FRANCISCO ARCHITECTURAL CLUB
SOCIETY OF BEAUX-ARTS ARCHITECTS





PRIZE WINNING DESIGN

SUBMITTED BY

E. E. WEIHE,
ATELIER A. BROWN, JR.

SAN FRANCISCO ARCHITECTURAL CLUB

CAPITOL BUILDING OF THE LEAGUE OF NATIONS

TWELFTH PARIS PRIZE,
FINAL COMPETITION

SOCIETY OF BEAUX-ARTS ARCHITECTS

Placed Third (1st Medal): L. Fentnor, Atelier Wynkoop, N. Y.

Placed Fourth (2nd Medal): A. C. Bieber, University of Pennsylvania, Philadelphia.

H. C: F. M. Hodgdson, Atelier Rebori, Chicago Architectural Club, Chicago.

H. C.: L. Morgan, Atelier Hirons, N. Y.

Boston Museum Buys Colonial House

The purchase by the Boston Museum of Fine Arts of the old Jaffrey house in Portsmouth, N. H., has just been announced. The house stands on a back street in the center of the town. It has been unoccupied for years and is neglected and out of repair. Changes have been made in the building from time to time so that it no longer presents a typical Colonial exterior, but the fine old paneling and woodwork inside are intact, and it is for these that the Art Museum has made the acquisition.

The interior of the Jaffrey house is to be stripped, and in so doing the Art Museum will be performing a service in preserving for posterity the architectural beauties of a period of which the examples are rapidly vanishing.

The old Jaffrey house in Portsmouth was built about 1750, that especially fine period of Colonial architecture, between the rather rough simplicity of the earliest period and the more ornate decoration of 1800. The house has a wide and ample entrance hall, typical of the period and similar to the hall of the Wentworth Gardner house, also in Portsmouth, which was purchased a few months ago by the Metropolitan Museum of Art, New York. The stairway is wide and easy, with fine baluster and hand-rail, richly turned and moulded. A paneled dado of painted pine with the characteristic wide old panels, all in one piece, runs around the hall. The woodwork is all in excellent condition, and there are many old fittings, such as hinges and latches, still in place.

The two principal rooms on the main floor are paneled across the fireplace end, and have a paneled dado around the other three sides of the room. The fireplace openings are framed in Delft tiles, painted with quaint scenes and surrounded by a heavy moulding. Each fireplace is flanked by fluted pilasters with Corinthian capitals. The windows have seats and deep splayed and paneled jambs. In one room the old contemporary wall paper is especially interesting and is Chinese in design. This, however, is badly torn and out of repair, and it is doubtful if any of it can be preserved.

The dining room has a fine corner cupboard, reaching from floor to ceiling. This has a quaint pilaster treatment and its door has some unusually beautiful paneling and H hinges. The interior of the cupboard is semi-circular in plan and has scroll-edged shelves and richly carved shell top.

All over the house there is a great deal of valuable miscellaneous material in the doors and windows, and much hardware and details of interest and artistic value.

Architectural Service by Airplane

England having achieved the first non-stop flight across the Atlantic Ocean, she may now add to her records the first instance where an architect has answered a hurry call by airplane. Recording this interesting and epoch-making event, the *Building News* of London states:

"To Mr. Paul Waterhouse belongs the distinction of being probably the first architect in this country to make the air passage from London across the Channel on a client's behalf. These are still early days for such professional excursions, and, with a view to recording the event, Mr. Waterhouse was asked for brief particulars of the voyage. He replies in the current *Journal* of the Royal Institute of British Architects: 'I expect there are other architects who have had occasion to fly on business, so I cannot attach much importance to an event which in any case will shortly become commonplace. But if you really wish to put on record the fact that architects, like other men of business or of art, can enjoy a professional journey overhead, the facts are these. A client wanted me to go to Paris in quick time during the strike, and asked me if I would oblige him by taking the upper route. I very naturally seized the opportunity, and went. Hounslow to Le Bourget took 2 hours 55 minutes. The journey (in a De Haviland 16 machine) exceeds for smoothness and tranquillity any locomotion I have ever experienced, though, of course, it is noisy, with a perpetual and rather restful noise. I made a half-inch scale section of the cabin *en route*. I also slept! My impressions of the voyage were, I suppose, the same as those of most "first-flighters," and need not be communicated. What struck me most were the sight of the Channel as looked down upon from 8000 feet—a sight to which I can attach no adjective but "poetic"—and the ancient majesty of France. Abbeville and Beauvais and the woods and fields between them were things not of to-day but of the Middle Ages.'"

Current News

Happenings and Comments in the Fields of Architecture and the Allied Arts

In order to supply our readers with material of current interest, the news and comment appearing in issues of THE AMERICAN ARCHITECT delayed by the printers' strike will be as of actual rather than stated date of publication.

Philadelphia Condemns Historic Residences

Some of the landmarks of Philadelphia, historic mansions occupied for many years by some of the most prominent citizens of the city, will be wiped out by the action of Mayor Smith in signing the ordinance condemning the block between Eighteenth and Nineteenth and Vine and Wood streets for Parkway purposes, comments the *Public Ledger*.

There are more than a score of houses that will be taken over by the city at a cost of more than $750,000. One of the houses was the home of General George G. Meade, the hero of Gettysburg, and others have been in the possession of prominent Philadelphia families for years.

The city will take over the twelve immense houses facing Logan Square on Vine street between Eighteenth and Nineteenth, ten smaller houses on Eighteenth and Nineteenth and an equal number on Pearl and Wood streets, as well as a number of stables.

The value of the houses on Vine street is estimated to be from $40,000 to $60,000 apiece. As far back as Civil War days they were the scenes of sumptuous entertainments, receptions and social affairs which reached a climax during the year of the great sanitary fair in Logan Square.

During that year the family of General Meade, who lived in the four-story brick house at 300 North Eighteenth street, which is on the corner of Pearl, entertained extensively. After his return as the victor at Gettysburg, General Meade was presented with another fine house by the citizens of Philadelphia.

The property is still in the Meade family, being recorded at the present time in the name of Hannah Meade.

Another interesting property to be taken over by the city is the home for cats and dogs, maintained for years in the house at the northeast corner of Nineteenth and Pearl streets by Elizabeth M. Ogden. The properties at 1813-15-17 Vine street belong to William G. Huey, the prominent broker and political light, who was formerly a member of Common Council from the Fifteenth ward. He was one of the sponsors of the Parkway and the author of the Parkway plan known to Philadelphians fifteen years ago as the "Huey plan."

The Kates family owns the big house at 1801 Vine street, which is in the names of Clarence S. and Emily S. Kates and Julia D. Hood. The Catholic Archdiocese owns the property at 1803 Vine street.

The house at 1811 Vine street, now occupied by Dr. Thomas E. Eldridge, was formerly the home of D. B. Martin, head of the great abattoir and stockyard industry on the west bank of the Schuylkill river. Amelia Sellers, widow of William G. Sellers, a prominent manufacturer, is owner of the house at 1819 Vine street.

The block is being taken by the city in advance of future Parkway development which will surround the great square with beautiful public buildings. The only three of these buildings now constructed are the Roman Catholic Cathedral, at Eighteenth and Race; the Academy of National Science, Nineteenth and Race streets, and the Wills Eye Hospital, on Race street, between Eighteenth and Nineteenth.

West of the Wills Eye Hospital will be erected the permanent home of the anciently established Franklin Institute of the Mechanic Arts and Sciences, while on the western side of the big square and along the west side of Twentieth street will be the buildings of the Municipal Court. These will stretch from Race street to the Parkway line.

On the north side of Logan Square will be the Free Library Building along Vine street, between Nineteenth and Seventeenth.

Inter-Allied Housing Congress

Delegates appointed by the Governments of the Allied countries will be present at the Inter-Allied Housing and Town Planning Congress to be held in London in June next. Among the subjects to be discussed will be national post-war housing and town planning policies, the preparation and carrying into effect of national programmes to secure proper housing conditions, standards of building construction, and national and regional town-planning developments. The congress will be asked to determine the minimum accommodation which should be provided for a normal working-class family, and the best courses to adopt in order to encourage the development of new methods of building and the use of new material. The proceedings will occupy nine days, and special trains will be placed at the disposal of the delegates, in which they will travel, to inspect the progress made in housing schemes in various parts of the country, including Birmingham, Manchester and Bristol. The countries and colonies represented will include Great Britain, France, America, Belgium, Italy, Australia, Canada, New Zealand, India, Egypt, South Africa, Serbia, Greece, Norway, Sweden, Denmark, Holland, Switzerland, Spain and the neutral Republics of South America. The congress is being organized by the National Housing and Town Planning Council, acting in close consultation with the Ministry of Health and other departments of the British Government.

Desecrating a Palace

The mansion of the late Cornelius Vanderbilt, in New York, is to be demolished and the site used for a hotel. This has provoked very indignant criticism from the press in all sections of the country. The *Morning Mercury* of New Bedford, Mass., describes the incident thus:

This palace, whose imposing exterior has thrilled New York men and women since its erection in the early '90's, is to change hands and eventually in its place is to rise a structure costing perhaps as much to build, but for another

purpose. The building that will replace it will be a hotel. In place of a home of art and beauty and personal interest that has reached the point of being one of the genuinely beautiful places of the greatest city in the world there will be a commercially operated building which will earn for its owners vast amounts of money. From quiet and unremunerative beauty to hustling money-making commercialism—from a work of art to a cash-drawer institution.

It required a year and one-half for the construction of the Vanderbilt home. Cornelius Vanderbilt, the builder, watched its erection with great interest and, although when first completed it contained only slightly more than as much space as it does now, he declared that he proposed to make of it his own idea of a comfortable and inspiring home. He said he expected to make it as beautiful and as important from an artistic standpoint as any home in the world, and he succeeded. The structure when completed commanded the admiration of architects and designers throughout the world.

Standing between Fifty-seventh and Fifty-eighth streets in Fifth avenue and about a half block to the westward, just where the avenue breaks into the broad plaza to Central Park, where since the Pulitzer fountain has been erected, it ranked for beauty of architecture alongside of any European mansion and was a show place for visitors to the city, as it has continued to be.

In 1893, when additions had been made, it was said the cost was something like $3,000,000. This figure was increased as years went by. George B. Post & Sons made the plans for the structure.

Standing across Fifth Avenue and looking up at the graceful spires and roof decorations combined with the grand expanse of the building one recalls pictures conjured up in the mind by fairy stories in other years. It is admired alike for its perfect workmanship and pleasing lines. The exterior of the building follows, according to architects, the general style of the Chateau de Blois, on the Loire River, in France, while inside everything conformed to Mr. Vanderbilt's ideas of comfort and elegance.

The age of sentiment thus gives way to the age of commercialism.

Simple Zoning Rule

City zoning to prevent business encroachment on residential sections is gaining in popularity. Where a city is already well built up it is more difficult to put the plan into operation, but it is not impossible.

Detroit now has a city plan commission investigating residential, commercial and industrial needs. This commission hopes to present a comprehensive zoning program next spring. In the meantime it has put into operation a wise temporary provision for the protection of valued home sections. This order provides that when 60 per cent or more of the frontage in any particular block is used exclusively for residential purposes it shall be deemed a residential district and commercial or industrial buildings or uses shall be banned. This seems to be a simple and ready means of checking the first small commercial inroads upon residence streets. It is a more permanent protection than the placing of building restrictions which are in effect when certain lovely homes are built, but which expire eventually and let in the business block, store or factory.

The recognition, rapidly becoming general, of the fact that a city need not be ugly if its inhabitants are willing to do the necessary planning to make it beautiful, is a hopeful sign. It is such recognition which is speeding up the spread of city planning and zoning programs all over the country.

Restore Roosevelt's Birthplace

The birthplace of Theodore Roosevelt, at 28 East Twentieth street, New York, is to be restored as nearly as possible to its condition in 1858, according to the officials of the Women's Roosevelt Memorial Association following a recent conference here with Theodate Pope (Mrs. John W. Riddle), the architect having the plans in charge.

An adjoining house at No. 26 has also been purchased and both structures will be remodeled to conform to the architecture of the time of the former President's birth. They will have brownstone fronts and mansard roofs and the interior of No. 28 will be made to resemble the boyhood home of the great American. Old mantels, chandeliers and furniture will be put back in place and childhood friends of the Colonel will supervise the decorations.

A Rooseveltian library, consisting of his books of rugged outdoor life and Americanism and other writings and published speeches, will be placed in the house at No. 26. Many other volumes the Colonel liked to read and dealing with many phases of human knowledge will be placed on the shelves.

According to the architect's plans, the top floor of both houses will be utilized for an assembly hall, suitable for gathering of Boy Scouts, Camp Fire Girls or similar patriotic organizations. When completed the memorial is intended to serve as an institution for the development of sturdy, old-fashioned Americanism.

American Ambassador to Britain Speaks of the Business of Architecture

The American Ambassador was recently the guest of the Royal Institute of British Architects at a reception held in their Conduit Street galleries, the occasion being the president's address at the opening of the new session. There was an unusually large gathering, and among those present were many of the most prominent members of the profession.

In his address, the president (John W. Simpson) dealt with the many and varied subjects concerning which the architect, if he would be efficient, must have more than a casual knowledge. The architect, he explained, must not only be endowed with the ideals of the artist, but must also possess the qualities of a sound man of business; he must not consider his profession as a thing to be lightly treated, but must realize that he has an important, vastly important, part to play in the national life, a part needing his most minute study and attention and the whole of his efforts.

He impressed his hearers with the necessity for plan in every undertaking and the entire subservience of decoration, for this, albeit an important part in the ultimate issue, was, he declared, by no means the necessity it had so often been considered in the past.

In proposing a vote of thanks to the president for his address, the American Ambassador, Mr. Davis, began with an apology for his position as layman, explaining that even as a lawyer, "who was supposed to know something of everybody's business," he could not rightly say he had any vast knowledge of the intricacies of the architectural profession. This apologia, if such it may be termed, was followed by a most masterly summing-up of what Mr. Davis conceived to be the responsibilities of the architect.

He was an historian, for it was the language of architecture, unaided by spoken words and dictionary, which told us much of what we know of Nineveh and Babylon, of the Romans and the Greeks; and it would be the work of the architects of to-day which would express the life of the present to the inhabitants of the future.

He should be a statesman, because it was architecture which spoke to all who saw it and explained, or should explain, the motive of its existence, and lastly he should be a diplomatist, and in expressing the best and highest qualities of his employers he should do so without stint and with fullest generosity.

The American Ambassador was followed by Sir Aston Webb, president of the Royal Academy, who, speaking from his long experience, called for a wider and broader outlook, for consideration of the masses of a design, rather than the detail, and said he was happy to see this spirit pervading the work of the younger men more and more. He reminded his hearers that the grasp of this problem was an outstanding feature of the work of the architects of America, and in a word he drew attention to the value of constructive criticism. It was better, he said, to tell the young men what you like, rather than what you thought was bad—encouragement being worth more than anything to the beginner.

The Housing Problem in Italy

In all the principal Italian centers of population the shortage of housing accommodations is acute, and strenuous efforts are being made to stimulate action in order that relief may be afforded.

At Rome conditions are even worse than in other Italian cities. According to the census of 1911, the city contains 79,441 dwelling houses, with 358,587 rooms. While accurate figures showing the increase in the number of dwellings since that time are not available, the building permits issued by the municipality cover only 49,627 rooms, states the *American Contractor*. This figure would represent the maximum increase, since the issuance of a permit does not necessarily mean that the work has been carried out. With the increase indicated by the number of building permits issued, the total number of rooms at the present time would be 408,214, and within these rooms a population of at least 700,000 must be housed.

Owing to the scarcity of accommodations there has been an active speculation in living quarters, and the government has found it necessary to prohibit the increase of rents and has made obligatory the extension of leases which may have expired until 1921. Particularly serious is the position of those occupying furnished rooms, for which measures have been adopted to prevent unreasonable increases in rates.

Previous to 1914 building companies and individuals constructed from 10,000 to 14,000 rooms per year, which, however, were barely sufficient to take care of the normal development of the city. During the war, of course, private building operations practically ceased, and since the armistice little has been done toward a resumption of activity. The great building institutions, for instance, the Institute Romano dei Beni Stabili and others, have suspended new construction for the reason that the increased cost of materials and the higher wages which must be paid to workmen do not permit their stockholders to derive a reasonable profit. Private builders are in the same position and are doing nothing.

Among other proposals to stimulate building, it has been suggested that under certain conditions new buildings should be exempted from taxation for a period of fifteen years in the case of dwellings for the better class, and twenty years in the case of tenements.

A Negro State on the Rio Grande

The plan outlined by Dr. Moses Madden of St. Louis, before the House Judiciary Committee, for a new State on the Rio Grande, partly from territory that Texas might be willing to yield, partly from country that Mexico might cede, to be inhabited and administered exclusively by negroes, has to be balanced against the scheme of concentration of negroes in Liberia, advocated before the same committee by the Rev. Dr. R. D. Jones of Philadelphia. In essence one is as un-American as the other. The Liberia notion seems rather more workable.

Most of the negroes in this country, writes the *Brooklyn Eagle*, even in Mississippi and Georgia and Arkansas, where mob law is at its worst, do not want to go to Africa and are not anxious to be segregated in a new State. Nor would the South consent to such segregation, for, in so far as it is possible to judge the future by the past, the successful raising of cotton depends on the supply of negro labor. That is one field, almost the only field, where a lifting of the ban on Orientals would accomplish little. Chinese coolies have been tried in the cotton fields and found wanting.

The cleverest agriculturist on earth might well despair of doing much in the Rio Grande country. The negroes are not clever, not advanced in their methods. In bulk and as a rule they are always good natured, fairly industrious and fitted to stand the climate where cotton is raised. There are full Ethiopians, half-Ethiopians, quarter-Ethiopians and near-whites among them. Politicians are not lacking. Let them have a state by themselves, even if there were a stone wall a hundred feet high around it, and toilers would soon get down to the starvation point, while those who had saved in the past would be exploited by shrewd men of their own race. The last state of that race would be worse than the first.

No, the negro wants to stay where he is, and will stay if he can get the common rights of a human being, security of life and property, jury equality, school equality. Social equality he is willing to wait for. On voting equality he is not insistent. He asks little. It is common sense for the Southern whites to muzzle their mobsters and keep their cotton pickers. But that common sense is the most uncommon kind of sense is proverbial.

State Aid in Building Houses in City Urged

At a discussion of the housing crisis in New York held by the City Planning Committee at the City Club, No. 55 West Forty-fourth street, Clarence S. Stein, Secretary of the Housing Committee of Gov. Smith's Reconstruction Committee, said that whereas before the war, 21,500 apartments had been built every year, last year only 1,500 were erected.

Thus, Mr. Stein explained, 60,000 persons were left in New York without homes. The old apartments, many of which, he said, had been empty, are now being occupied by people accustomed to better quarters, but unable to pay the high rents.

Mr. Stein gave two remedies for the situation—to have the State either go into the purchase and holding of land for dwelling purposes or to lend its credit to builders. Mr. Stein also believes that there should be definite planning whereby workers in an industry, for example, the clothing workers, should have their place of employment moved to Long Island City, where housing facilities might be had.

Agreeing that the situation in the city was very bad, John J. Murphy, former Tenant House Inspector, declared he did not believe in State assistance, as that meant State Socialism. He took the stand that the State could not build as cheaply as the man who was looking out for his own interests.

Walter N. Seligsburg, of the Legislative Committee, said his committee had been considering housing bills now before the Legislature, one of which provides for exemption from taxation for four years.

Kansas City Chapter of American Institute of Architects

In an address before the regular monthly meeting of the Kansas City, Mo., Chapter of the American Institute of Architects, for January, held at the Savoy Hotel, Max Dunning, of Chicago, chairman of the Post-War Committee, acting under the auspices of the American Institute of Architects, explained the many changes made by the war in the architectural profession and the work of his committee in the readjustment.

Mr. Dunning spoke of the need for improvement in the quality of service rendered by the architect and his unselfish co-operation with all concerned in the erection of a building. In closing his address, Mr. Dunning urged that each architect present give independent study to the problems of reconstruction and co-operate with the Post-War Committee in meeting the changed conditions.

Three Planning Commissions in One City

City-planning problems in Pittsburgh are at present being dealt with by three different bodies, in addition to the city Department of Public Works and the county engineer's office. There is a City Planning Commission of nine members, appointed by the mayor; a County Planning Commission of some twenty-five, appointed by the county commissioners; and a volunteer Citizens' Planning Commission, which has recently been organized and has engaged a consulting engineer to carry on its studies. The actual official authority of the former two bodies is small, as the city commission has no other definite authority than the approval of lot subdivisions, and the county commission is purely advisory, on subjects referred to it by the county board. The citizens' body is entirely unofficial and will presumably aim to accomplish results by guiding and shaping public opinion.

American Sculptor is Honored by Belgium

The fine arts class of the Belgium Academy in Brussels has named nineteen foreign associate members. They include Frank Brangwyn, president of the Royal Society of British Artists; Ignacio Zuloaga, Spanish painter; Daniel Chester French, American sculptor, and Ignace Jan Paderewski, the famous pianist and former Polish Premier.

Imported Houses for Greece

There is a big demand in Greece for houses which can be taken to pieces, removed, and reconstructed at will, and a Swedish offer has been received offering 500 at prices varying from 1,150 to 3,600 krons Swedish. An American firm has made a proposal to set up workshops in Greece at a cost of 5,000,000f. provided they receive orders for 4,000 houses consisting of two rooms, kitchen, and accessories. They undertake to erect from 100 to 200 houses per day.

School of Design and Liberal Arts Opened

The School of Design and Liberal Arts has recently opened its new studios at 212 Central Park South in the building occupied by the American Institute of Applied Music, with the aim of permitting the student to create his own career according to the measure of his talent and individual initiative. In co-operation with the Art Alliance of America students are brought into close touch with the best in the applied and industrial arts. A large and liberal cultural background is also sought. The purpose of this school is to give a sound technical foundation in the arts; to develop intellectual breadth through the study of modern history, modern literature and science, and to promote American citizenship by training artists who will work out American ideals in their art.

"The new education in the new America must stand for keen brains and skilled hands. These are not casual products. They are the result of training, judgment and creative energy. Production of fine arts and the cultivation of fine taste are needed to restore balance to life. The artist's contribution is one of peculiar importance. The art future of America depends upon the intelligence, the skill and the vision of the art worker to-day."

Dr. Felix Adler is the rector of the new school, and Franklin C. Lewis its superintendent. Other members of the faculty are: Irene Weir, B. F. A., Yale; George R. Barse, N. A.; Elliott Dangerfield, N. A.; F. Luis Mora, N. A.; Wood Gaylor; Wm. E. Bohn, Ph.D.; Ada Rainey; R. C. Willard, M. A.; Genevieve Joy; Ruth Eddy, B. S.; Gertrude D. Ross; Ann Goldthwaite; Arthur E. Baggs, M. C., and Mrs. J. I. C. Lindsley. The advisory and arts committee includes: H. W. Watrous, N. A.; Royal B. Farnum, George L. Hunter, Walter Ehrich, Maximilian Toch, Dr. Max Wallerstein, Douglas Volk, N. A.; Jonas Lie, N. A.; Mrs. Dorothea W. O'Hara, Mrs. Frances Hellman, Mrs. Felix H. Adler, and Mrs. E. F. Oppenheimer.

New York School Posters Educate the Country

Posters made in the high schools of New York have, during the last year, been traveling all over the country in a campaign of education. They were originally designed to assist the Brooklyn Committee on the Prevention of Tuberculosis and proved so valuable in their local use that other cities sent for them. The contest was organized under the supervision of Dr. James P. Haney, Director of Art in the High Schools. More than two hundred posters were made in the schools, each school developing a local competition. The best posters from the twenty-five high schools went to the Art Alliance, where they were judged by a committee headed by Mr. Edwin H. Blashfield.

Our Shrinking Forests

Rough estimates in the *World's Work* put the original forest area of the United States at 850 million acres and the present forest area at perhaps 550 million acres. But in that present estimate 250 million acres are partially cut and burned over and 100 million are so severely cut and burned that, unless supplemented by planting, there will be no succeeding forest of commercial value, leaving about 200 million acres of mature and merchantable timber, or less than one-fourth of the original area.

Improved Pottery Designs in Great Britain

The subject of pottery design is receiving much attention in Great Britain at present, states Trade Commissioner Leonard B. Gary. It is possible that this movement has been influenced by a pamphlet recently issued by the United States Bureau of Education, urging the importance of adequate training in industrial art and asserting that America must turn from its quantity methods and put the country's commerce on a quality basis. Reports from German pottery centers are to the effect that German potteries also are going in for high quality of design and technique as opposed to the cheap wares that formed the bulk of their pre-war manufactures.

National Etiquette Makes Rug a Drapery

Between the British and American attitude toward the United States coat of arms there is a difference, and because of the difference a rug became a mural drapery.

The rug, in which is woven the design of the American eagle, was the gift of the British Red Cross Society and the Order of St. John, and was intended for the floor of an American hospital which was to have been built in London on a site chosen by King George. Building plans were abandoned when the armistice was signed, and the rug was sent to Red Cross headquarters in Washington.

Then followed the difference of national usage. A ruling of the headquarters called attention to the fact that in America it is bad form to set foot on the national emblem or coat of arms, and held that the rug might be used for decorative purposes. It now hangs in the Northern division office of the Red Cross in Minneapolis.

Aeronautical Exposition, New York

When the Manufacturers' Aircraft Association holds its Second Annual Aeronautical Exposition at the Seventy-first Regiment Armory, 34th street and Park avenue, New York, in March, the public will have an opportunity to see what American designers have accomplished in developing commercial airplanes—planes for private use, for sporting or touring purposes, or long-distance transportation of freight and mail.

The airplane owes its development principally to the war. Since hostilities ceased, however, American manufacturers have concentrated their efforts on planes for pleasure, sport and commercial uses. The exhibits will represent all producing airplane factories in the United States. Many of the planes are already assembled and in daily flights. Some of the larger ones are carrying mail between principal cities. Others of advanced construction will receive trial flights a few weeks before the exposition opens on March 6th.

Many of the models have comfortably enclosed cabins with unbreakable glass windows. They seat from four to twelve passengers in chairs as luxuriously appointed as those of a Pullman. Noise of the motors is deadened and passengers enjoy a flight much the same as if they were riding in an observation car or limousine without the wheels touching the ground.

Many of the smaller machines are of the limousine type, accommodating two or three persons. They are, of course, much more expensive both in initial cost and expense of operation. Then there are several types of sporting machines, a majority of them flying boats.

The larger planes have a carrying capacity of from three to six thousand pounds and, driven by three or four motors, will cover half the distance across the United States in a single flight. The cost of operating airplanes has been reduced during the last year from the almost prohibitive figure of one and two dollars a mile until now it compares favorably with motor trucks and railroads.

Tasmania Has Its Housing Problem

The housing problem, which has become an acute one all the world over, is at present engaging attention in Tasmania, comes the news from Hobart. Rents have become exceedingly high, and houses are not to be had for letting, though they can be bought at inflated prices.

Hundreds of houses are being built and estates cut up for building allotments, but tenants are secured before the foundations are in. The scarcity has led to a great deal of overcrowding and sub-letting of rooms, and residential flats are now becoming part of the architecture of the country.

One of the most pressing problems has been to find shelter for people turned out of buildings condemned by the health authorities. This has led to the municipal authorities deciding to go into the matter of building homes for these people, and the government has introduced legislation into Parliament to enable the government to build houses on the hire-purchase system for people in receipt of not more than £300 a year. As a start, the government is to spend £70 000 in building houses. Three-roomed houses with bathroom are to be let at 10s. a week and four-roomed houses at 12s. It is estimated that the capital mentioned will build 100 houses.

The total cost of any building is not to exceed £700, including land. The tenant is to find 5 per cent of the capital. The period of repayment is forty-two years for concrete, brick, or stone, and thirty years for houses built of Tasmanian hardwood.

In addition, 2000 houses are being built for returned soldiers on the hire-purchase system, by the Repatriation Department, and industrial concerns are also assisting their employees to become their own landlords. All these schemes in combination should, therefore, soon appreciably ease the present acute situation.

Nebraska Chapter Meets

The annual meeting and dinner of the Nebraska Chapter, A. I. A., was held Tuesday, January 20, at the University club, Omaha. Edwin H. Brown, of the firm of Hewitt & Brown, architects, Minneapolis, was the speaker of the evening. Thomas R. Kimball of Omaha, president of the American Institute of Architects, also gave a short address. The officers of the Nebraska Chapter are as follows: President, Alan McDonald, Omaha; vice-president, Ellery Davis, Lincoln, secretary-treasurer, J. D. Sandham, Omaha. The above officers, with Frederick W. Clarke and F. A. Henninger of Omaha, constitute the executive committee.

Sightly Water Tanks

There is not to be found anything much more unsightly than huge city water tanks which disfigure so many of our towns and cities. Often the residential sections are made unpleasing by these necessary tanks. The city of Cincinnati solved the problem of retaining its water tanks in a residential part of the town and yet transforming them into impressive monuments which add to the appearance of the district.

The steel tanks were surrounded by a concrete shell, artistically designed so that the hill on which these tanks stand is a show place instead of an unsightly spot that one tried to avoid formerly.

The tanks are of steel, and these were filled with water before any of the concrete was poured, as slight changes might take place otherwise and cause the concrete to crack. The forms for the first setting were braced to the ground and supported on the foundation, but the difficulty began when the forms had to be raised for the second section setting. With this problem settled, however, the work went on without any trouble.

Personals

A. F. Wysong, Charles W. Tufts and Thomas P. Jones announce the opening of new offices at 408 Odd Fellows Building, Charleston, W. Va. Catalogues and samples desired.

Morrison & Stemson, architects of Spokane, Wash., have formed a partnership and will practice in the Symons Building, that city.

Harry Maurer, architect, Reading, Pennsylvania, has moved offices to 234 N. Fifth avenue.

Walter A. Besecke, architect, formerly with the firm of Hoit, Price & Barnes, Kansas City, Mo., is now associated with J. C. Sunderland, 313 Interstate Building, Kansas City, Mo., forming the firm of Sunderland & Besecke.

A. V. Capraro, architect, has opened new office, 628 Reaper Block, 105 North Clark street, Chicago.

Wm. H. Emory, architect, has moved his office to 615 Munsey Building, Baltimore, Md. He was formerly located at 11 E. Lexington street, Baltimore, Md.

C. Le Roy Kinport and C. E. Bell, architects, have affiliated and established offices at 909 Andrus building, Minneapolis. Mr. Kinport was formerly located at 1046 Andrus building. The firm will be known as Kinport & Bell.

News From Various Sources

Carnegie Corporation of New York has announced its purpose to give $5,000,000 for use of National Academy of Sciences and National Research Council. Understood that a portion of money will be used to erect at Washington a home for the two beneficiary organizations. Remainder will be placed in hands of Academy to be used as permanent endowment for National Research Council.

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Belgian structural steel, Canadian brick and lumber from Pacific Coast begin to loom up as possible agencies that will halt higher building material prices in most of eastern seaboard cities.

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American Institute of Architects, through William S. Parker, Secretary, has asked Industrial Conference to consider methods of dealing with American housing situation, inasmuch as present housing shortage is regarded by Institute as important factor in industrial unrest. Institute suggests that housing acts of other countries and reports of wartime housing activities of United States Government should comprise sound basis upon which Conference may work.

* * *

Bradstreet states that the value of construction at 151 cities last year was $1.281,000,000, three times that of 1918 and 80 per cent in excess of that of 1917, while 20 per cent in excess of the hitherto record year, 1916, since when, however, values of building material have gained 80 per cent while wages have in some cases doubled. Only 7 cities of the 151 reporting show a smaller value of building in 1919 than in 1918.

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Statistics Branch, General Staff, announces that discharged officers and men of U. S. Army are entitled to free hospital treatment for sickness or disability arising from sickness or injury incurred in line of duty while in service. This treatment is furnished by Bureau of War Risk Insurance through U. S. Public Health Service. To facilitate handling of cases country has been divided into districts. Statement gives list and location of hospitals.

* * *

Announced from Winnipeg, January 8, that the housing commission operating under city's housing plan will make a loan of 85 per cent of net cost of home. A first mortgage will be taken on property for 20 years, repayable at rate of $7.13 a month for each $1,000 borrowed.

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Herbert Hoover makes the declaration that "The whole problem of Americanization would be met in 20 years if nation could systematically grapple with child problem and insure proper conditions of birth, education and nutrition. In order to accomplish this, the conscience of every separate community must be developed."

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Announced from Strasbourg that rapid progress is being made in the reconstruction of devastated areas in Alsace and Lorraine. Stated that sum expended amounts to approximately 150,000,000 francs.

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Federal Reserve Board has advised all Federal Reserve Banks which have not yet begun their building operations to perfect their plans in detail, but to postpone for the present letting contracts for construction. A careful survey of building conditions has demonstrated fact that building materials and construction costs have recently advanced to too high a point to justfy Board in authorizing building at this time.

Weekly Review of Construction Field

Comment on General Conditions of Economics With Reports of Special Correspondents in Prominent Regional Centers

In his address to the Boston City Club, Mr. C. H. Blackall, architect, outlining the future of building, indicated that the price of building material is not due for an immediate slump. After the past four years, he said, the people want to build and it is not difficult to obtain the money to begin building operations, the tendency being toward the erection of commercial buildings rather than homes. Mr. Blackall predicted the largest boom the building industry has ever known.

It seems evident that the hesitation in carrying forward building projects because of an expectation of lower prices and cheaper building costs is now at an end. For one thing, it is found that there is a generous amount of vitally necessary work projected which will go ahead regardless of cost. There is also current a strong body of opinion which does not look upon present conditions as inevitably resulting in a business depression with its consequent reduction of prices of building material and of labor costs. They hold a view that the world-wide inflation has decreased the value of currency everywhere, that wages and prices merely seem high, as all money payments are high. Prices have doubled since 1914 and although the lagging in the increase of some payments behind others produces an injustice yet it gives no sound reason why a man should hesitate about carrying on needed work. To do so would be to make a great mistake. To further retard production is to make more probable an actual business depression with all the suffering it involves.

Aside from the actual money payments, labor costs have been alarmingly high. Part of this was due to the number of unskilled workers doing skilled work, part to the nervous demoralization by the war, part to shirking. But a leading contractor now finds that these costs are coming down again. He says his men are turning out as much work in an hour as they did before the war and in many cases there are indications of improvement over the earlier averages.

When such reports become general through all lines of endeavor we shall have turned in the right direction. Until then we can only look back upon the past with dissatisfaction.

At the conference of trust companies of the United States, held in New York, Mr. Sisson, vice-president of the Guarantee Trust Co. of New York, gave statistics of our under-production during 1919 as follows: "There were 130 million tons less of bituminous coal mined last year than in 1918; there were 12 million tons less of anthracite coal produced than in 1918; 9 million tons less of steel ingots; more than 5 million bales less of cotton than in 1914; 76 million bushels less of wheat than in 1915; 140 million bushels less of corn than in 1917; more than 900 million pounds less of copper than in 1918; more than 10 million dollars less of gold than in 1918; and more than 4¾ million dollars less of silver than in 1918."

It would seem that our prosperity is to be dangerously superficial until we get down to work.

(By Special Correspondence to THE AMERICAN ARCHITECT)

Chicago.—Building contracts for January in the Middle West, while not equaling the monthly average of 1919, were nevertheless almost twice that of any January on record. About 40 per cent was for industrial buildings, 30 per cent for houses, 15 per cent for public works and 15 per cent for business.

There seems to be no sign of reduced buying power and such limitation as is shown comes from physical inability of labor and railroads to keep abreast of the demands for production and distribution. The leading mail order house reports a gain of 50⅓ per cent in gross sales over January of last year, one-half of which represents higher prices. Chicago is short 75,000 to 100,000 homes. On May 1 there will be rental advances of from 20 to 50 per cent in addition to the two or three advances which became effective during the past two or three years. That rents are high is not surprising; so is everything that goes to make them and so are the wages out of which they are paid.

There is no slackening in the demand for steel products, especially for wire and nails, the buying of which recently has been enormous. This is not considered unusual, however, as the season is now on when jobbers all over the country place orders for anticipated requirements. Some of the independent makers are asking and receiving $1 or more over the price of $3.25 per keg asked by the American Steel & Wire Co. But this latter company is still holding to the prices agreed upon with the Industrial Board in Washington in March of last year.

Jobbers in various sections of the country are said to have been receiving on small lots as much as $5 per keg over the leading manufacturer's price, and the buyers have shown a willingness to pay whatever is asked of them.

Improvement is shown in the market for structural shapes, indicating that the lull in buying reported a week ago was only temporary. Urgent inquiries are now in the market for early deliveries in connection with building operations in many large cities, but the markets are not in position to take this business and in some instances it is likely that the inability to get steel will delay until late Summer operations which were expected to start in the Spring.

The carpenters' strike and lockout of last Fall delayed building operations and held up construction work for months until the wage demand of $1.00 an hour was granted. Demand has now been made by thirty-three labor unions for $1.25 instead of $1.00 an hour.

(By Special Correspondence to THE AMERICAN ARCHITECT)

Seattle.—Increasing difficulty of getting tubular steel products from the East was the outstanding feature of the construction market this week. All operators report that it is now practically impossible to secure quotations for spot delivery on finished steel products, and the only way in which manufacturers of the East will trade is

on the basis of June firming on quotations then in effect.

The situation has improved as to pipe. Eastern mills say frankly that they cannot contract for steel products for the first six months of this year, but that all orders must be subordinate to prices that will be quoted at the time of loading. Larger steel parts are obtainable, but the line of demarkation between essential building and heavy units for other purposes is now more clearly drawn.

It seems to have been necessary for the mills to grow more confidential with the North Coast jobbing trade in formally declining orders for steel building hardware. They have advised the largest interests here that they are unable to get skilled labor for finishing.

Contractors, in view of price and delivery difficulties, are unwilling to bid on any construction job that has to do with futures. Materials are so high and labor in so uncertain a state that bankruptcy and prosperity are but a shade apart. No guarantee of prices is possible, and delays in completion of work threaten at every turn.

Lumber prices have advanced $2 on common building sizes and $5 on flooring, ceiling and finish. The fir mills are accepting only such new business as carries the greatest profits, as they have unfilled orders for 400,000,000 feet, placed as long ago as last August, and are unable to get more than 30 per cent of enough cars to meet their requirements. There seems to be no chance for a break in lumber prices at this time. During the week between fifty and sixty wholesalers arrived in person on the fir lumber market, and have been bidding against each other for building stock. The Spring buying season for the East is on and stocks are depleted.

There is a fair reserve of paints, oils and lead. Painters' cutlery, due to the condition of finished steel products, is critical, and jobbers are "rationing" what they have on hand among the retailers.

The plaster and cement markets are firm.

(By Special Correspondence to THE AMERICAN ARCHITECT)

San Francisco.—The reappearance of a law which was struck from the California Statutes several years ago in regard to competitive bids from architects is causing extensive discussion among local architects. The Board of Education of Sacramento, Cal., capital of the State in which the law was repealed, is now advertising for competitive bids from architects for the preparation of plans for school buildings which are to be erected under a bond issue and which will cost in the neighborhood of $2,000,000. Also, in filing a bid, each architect is obliged to file with it a certified check for $5000 as a guaranty that he will comply with the bid if required to do so by the Board.

A number of the architects are wondering if competency is to be gauged by the smallness of the fee asked for the preparation of the plans or the ability to put up the certified check for $5000.

No particular change has been noted in the material market this week with the exception of a general upward trend of prices on lumber and steel. The steel market continues to be more or less difficult, with orders exceptionally hard to fill and prices higher than ever.

(By Special Correspondence to THE AMERICAN ARCHITECT)

Boston:—Statistics of building and engineering operations in New England show that contracts were awarded from January 1 to February 19th, 1920, amounting to $30,671,000, or an increase of nearly $22,000,000 over the awards of the corresponding period in 1919. These contracts are not confined to any particular type of structure but are general in scope—a large proportion being for commercial purposes.

Sales of real estate for the past week have been brisk but little construction has been actually started because of the severe weather conditions.

In Hartford, Conn., a new housing corporation with capital stock of $1,500,000 has just been formed. It is reported that this organization will erect between 950 and 1,000 houses of the one and two-family type for that city.

Crippled transportation facilities, both rail and water, have caused an acute shortage of materials and of coal. Several manufacturing plants have been obliged to close down temporarily because of the lack of coal. The Shipping Board, however, has promised relief for the coming week.

In many sections the idea is still prevalent that prices of materials and of labor will be less. Therefore building in these localities is still hampered and is, of course, practically completed so far as design is concerned.

(By Special Correspondence to THE AMERICAN ARCHITECT)

Albany:—A bill is to be presented in the legislature by State Senator Dowling which will limit rental contracts of buildings used for residential purposes to a sum which shall be not more than 10 per cent upon the actual valuation. The "actual valuation" will be, according to the bill, "the assessed valuation plus 20 per cent." The bill will provide that in actions upon leases the landlord must prove that his contract is not unlawful. Any excess of rent shall be recoverable by the tenant. It will be allowable, however, for the landlord to assess actual increased costs of operation or maintenance, including taxes, pro rata among his tenants.

Vanderlip's Speech to the Economic Club

Mr. Vanderlip, in his speech before the Economic Club, expressed the belief that employers should make no effort to reduce wages because a lowering of efficiency in American factories and shops might result. He added that every effort should be made to satisfy American labor, as he thought that the most effective way of increasing efficiency.

"It is now time to look forward to constructive policies," Mr. Vanderlip said. "It was idle to propose constructive policies if they were to stand on a foundation of sand, a foundation of misconception, ignorance, and prejudice. To plan such a policy national leadership must have vision to look ahead. There is a need for a vision that will enable us to see further ahead than a speculator standing over a stock ticker.

"In the period since the armistice national leadership has failed. When there was extreme need for co-ordinated and co-operative effort in this country we have seen the Government fritter away months in frivolous, inconsequential debate and in the play of partisan antagonisms.

"If we had understood the full import of this world crisis we should have demanded from the Administration intelligent information and authoritative leadership; we should have demanded of Congress that the men who occupied time on the floors of both houses should show some comprehension of the existing facts of the economic life of the world. We should have demanded of financial leaders evidence of an understanding of America's financial responsibility to act in the direction of safeguarding our credit situation."

Mr. Vanderlip said he was not pessimistic about the facts, but that he was pessimistic about governmental and national b'indness to these facts.

Department of Architectural Engineering

Factory Stairs and Stairways*

PART I

By G. L. H. Arnold

While this article relates particularly to factory stairs, yet most of the features discussed apply with almost equal force to stairways in many additional types of buildings. A careful perusal of the statistics relating to accidents due to slipping and falls brings one to a realization that what has often been considered of minor importance, namely, the detailed design of stairways, halls, public passageways and similar places, is the cause of a large proportion of both serious and fatal accidents. The design of the stairway should be given a place of prime importance in the planning of every building, with a view of reducing this increasing casualty list.—*The Editors*, The American Architect.

IN the multi-story factory the stairway is a detail worth much more than passing notice. Bear in mind that the people above the first floor are dependent on the stairs for egress; that four times daily the stairs are crowded by people in a hurry; that a large percentage of the minor accidents, many of the serious ones and many panics happen on the stairs.

A poorly designed stairway may be an effective way to spread fires, smoke or false alarms, and is sure to be a disturber of the heating system. A properly designed and located stairway affords not only a safe and convenient means of entrance and exit but also the handiest and most effective vantage point from which to fight fires on the upper floors.

In solving the stairway problem consideration must be given to: (1) number; (2) location; (3) size; (4) type; (5) materials; (6) safety treads; (7) proportions; (8) landings; (9) handrails; (10) enclosures; (11) lighting; (12) wear. These will be considered in the order named.

Number

Where building codes are in force the minimum number of stairways permitted is usually ample. Perhaps the most usual code requirements are one stairway plus one for each 5000 sq. ft. of lot area.

In cases where the code provision is insufficient, and where there is no code, it is essential to consider: (a) safety; (b) capacity; (c) convenience.

Safety. No building over two stories in height is safe with less than two stairways. A single stairway may at a critical moment be blocked by a temporary disarrangement of stock or fixtures on the floor, by repairs or by fire.

Large floors require an increased number of stairs even if but few people occupy the floor. As the distance of the extreme point from the stairway increases, so do the chances of floor barricades. Furthermore, in case of panic, fire or other accident the time required to walk or carry an injured or fainting person 100 ft. or more may be enough to produce serious results.

Two 4-ft. stairways for buildings having up to 20,000 sq. ft. of floor area, with one additional 4-ft. stair for each additional 10,000 sq. ft., form the least number that it is prudent to use.

If the building is liable to be used for purposes which may permit the occupants to be closely spaced, the number should be increased to two for the first 12,000 sq. ft. plus one for each additional 6000 sq. ft. At least one and preferably all of the stairways should be carried to the roof.

Capacity. In densely populated buildings the number of stairways must be increased to prevent dangerous over-crowding when all the occupants try to leave at once. In such cases 20 in. in width for each one hundred persons, the Boston rule for theater exits, is high, and 10 in. to 14 in. would be ample.

Convenience. Avoiding the disturbance of discipline and the loss of time caused by the passage of people through other departments, especial arrangements on one or more floors, the need of accommodating the building to the shape of the plot, the location of exits, and the advantageous subdivision of floors among different tenants or among different departments of the same tenant may make it desirable to increase the number. No

*Paper presented before The American Society of Mechanical Engineers.

question of convenience should be permitted to cause stairs to be so located that any occupant of a factory would be obliged to travel over 100 ft. to reach an exit.

Location

In the matter of location many items should be considered. Every stairway should communicate directly with an exit from the building. The stairs

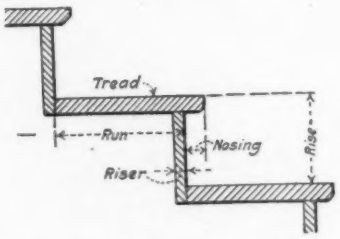


Fig. 1.—The Parts of a Step

should be distributed with a fair degree of uniformity and so placed as to reduce as much as possible the maximum distance to be traversed to reach an exit. On each floor the landing should be so placed that lines of men going from shop to locker room, locker room to stairs, and shop to stairs should not conflict.

It is also highly desirable to avoid obstructing the foreman's view of the room. When practicable, the separate tower or wing is the most satisfactory location. The locker and toilet rooms and the elevator can be in the tower, thus leaving the main building clear of obstructions and giving the foreman an unobstructed view of the room and permitting greater freedom in the floor layout.

Size

A clear width of 44 in. to 48 in. between handrails will allow the passage of two lines of people at once, and the main stairs should never be less than this. If wider, the width should be in multiples of 22 in. to 24 in., the number of handrails being such that it is never less than 44 in. nor more than 48 in. between rails.

Where the number of employees is large it is better to increase the number of 4-ft. stairs than to increase the width. Even when the number of employees in a building is large, only one floor, as a general thing, will be densely populated. This crowded floor is as likely to be at the top as at the bottom. Therefore it is the usual practice to make factory stairways of constant width throughout their entire length.

Occasionally a factory building must be designed to accommodate dense population on two or more floors. In this case the employees from the upper floors coming down at the full capacity of the stairways will find the lower flights already taxed to the utmost and serious congestion will result. The remedy is increased width for the lower flights.

Additional stairways from the lower crowded floors may not cure the trouble because in the excitement of an emergency, when free and quick egress is most important, the occupants of the lower floors are likely to rush to the busiest stairway and leave their own special exit unused. Special stairs, not used for general ingress and egress, may be as narrow as 20 in. in clear width; they may be steep (Fig. 2), or, if not much used, they may have winders or be spiral.

Type

Except for special cases used by but few people for intradepartment shortcuts, spiral stairs and winders should never be permitted in a factory. Straight runs alone are permissible. When the story height exceeds 9 ft. the flights should be cut

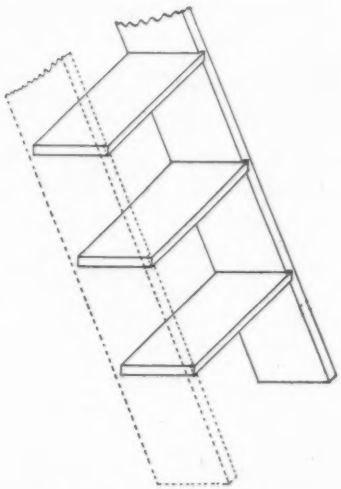


Fig. 2.—Steep Factory Stairs

and intermediate landings used. The landings should be rectangular and the flights be not less than three risers nor more than 9 ft. high.

The intermediate landing is of little use if the flights are in line. A turn at the landing serves to limit a fall. A 180-deg. turn has the further

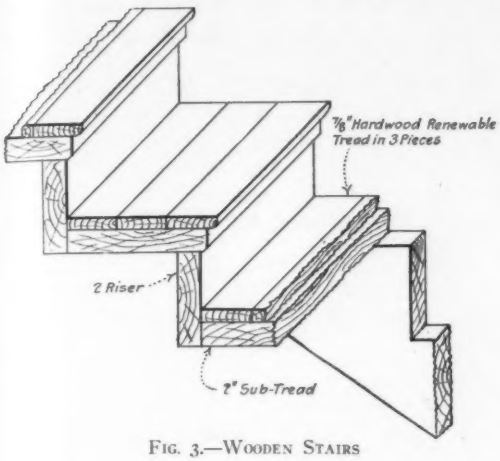


FIG. 3.—WOODEN STAIRS

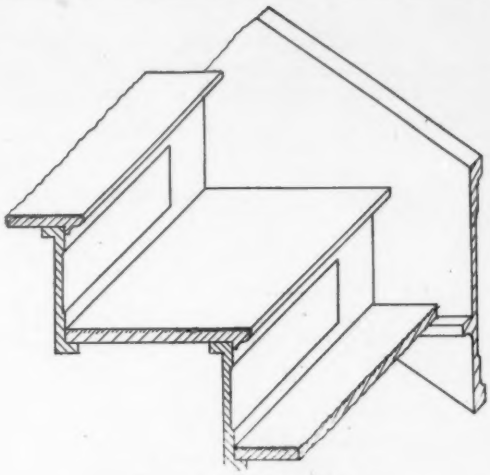


FIG. 4.—CAST-IRON STAIRS

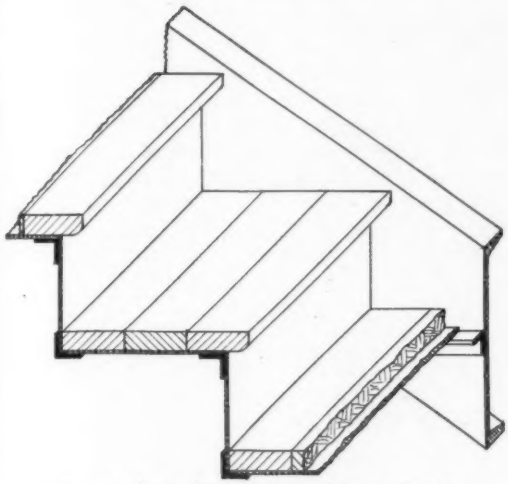


FIG. 5.—STEEL STAIRS WITH WOODEN TREAD

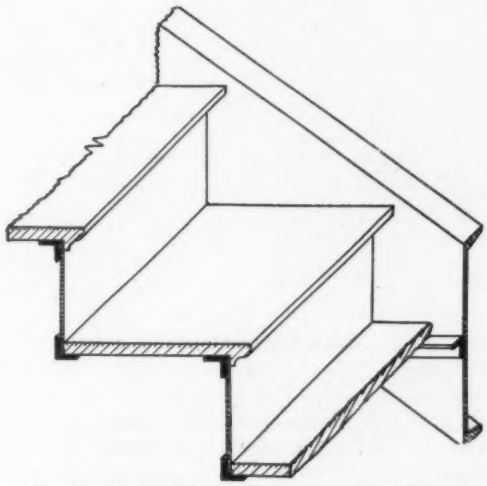


FIG. 6.—STEEL STAIRS WITH CAST-IRON TREAD

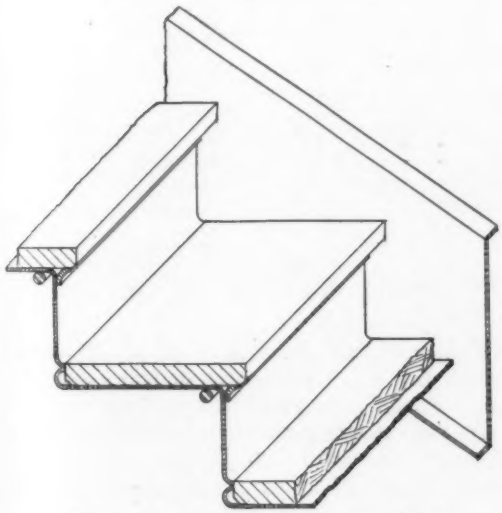


FIG. 7.—STEEL STAIRS WITH STONE TREAD

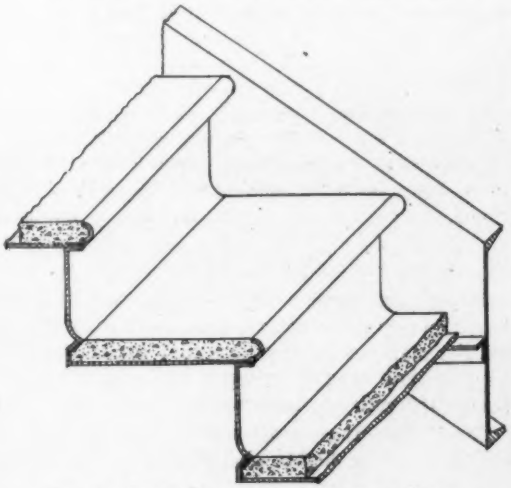


FIG. 8.—STEEL STAIRS WITH CONCRETE TREAD

VARIOUS TYPES OF STAIR CONSTRUCTION

advantage of reducing the floor space required. In fact, the stairway of minimum floor area (barring spirals) has a landing and a 180-deg. turn every 4 ft. in its height.

Materials

The factory stairs are usually of wood, Fig. 3, cast iron, Fig. 4, steel or steel with wood tread,

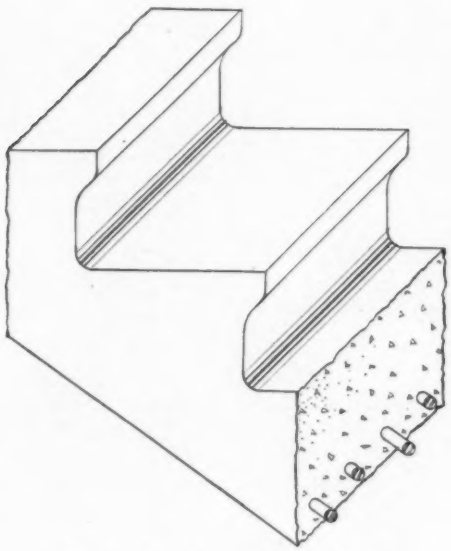


Fig. 9.—Reinforced-Concrete Stairs

Fig. 5, steel with cast-iron tread, Fig. 6, steel with stone tread, Fig. 7, steel with concrete tread, Fig. 8, or reinforced concrete, Fig. 9.

The wooden stair in multi-story factories is not good practice. It is combustible and unsanitary. In buildings of mill construction, however, especially the smaller ones when not over four stories in height and sprinkled, wood may be acceptable. The wood must be smooth, closely jointed, free from beads and not less than 2 in. thick, making a slow-burning construction. It is imperative that the wooden stairs be enclosed in a fireproof well.

The saving in cost, however, over a non-combustible stairway is not great enough to warrant the risk except in special cases. Cast iron and steel while non-combustible, are not fireproof. Nevertheless, they are permissible when, as it always should be, the stairway is in a fireproof enclosure, since any fire hot enough to weaken the metals would render the stairway impassable.

Steel channels are more reliable for stringers and, except for short flights, cheaper than cast iron, and are more generally used. Risers are usually of angle and steel plate or pressed steel. Treads, while usually of cast iron, are frequently of checkered steel plate, wood, slate or concrete.

Cast iron and steel plate wear slippery, and hence they are dangerous and should never be used without some sort of safety tread.

Wood, because of its inflammability, should not be used except as a safety tread over a solid sub-

Fig. 10.—Safety Steel Tread With Lead Plugs

tread. Slate does not wear slippery, but it is more expensive. It must be backed up by steel plate, and replacements are expensive.

Concrete as a tread on steel stairs has no special advantage. The steel plate under tread is needed, as it is for wood or slate, and to facilitate casting the steel is usually carried up to form a nosing. This is dangerous. The concrete is liable to crack off or wear below the top of the steel, leaving a lip over which sooner or later someone will trip and fall.

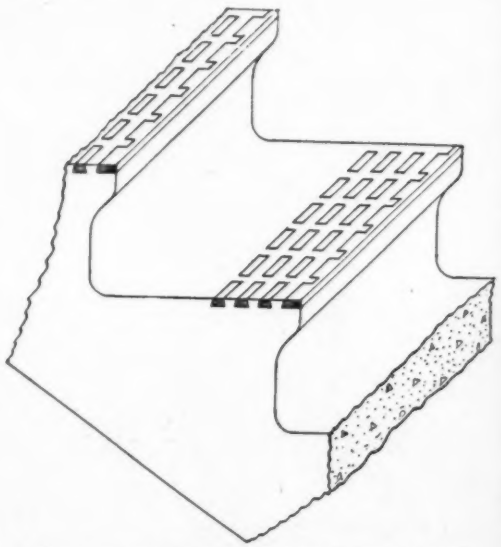


Fig. 11.—Lead Safety Tread in Concrete Stairs

Reinforced concrete makes perhaps the most satisfactory stair if properly designed and built. There should be a good filler between tread and riser, for sanitary reasons at least. There should be a nosing, which is not difficult to cast if made with a large fillet.

Safety Treads

Steel, cast iron and concrete wear slippery and so become dangerous. Consequently some form of safety tread must be used. Safety treads are made of: (a) lead; (b) abrasive material; (c) a combination of the two; (d) cork; (e) wood.

Lead Safety Tread. The lead safety tread is made by inserting plugs of lead in pockets in a steel frame, Figs. 10, 11 and 12, the whole being fastened to the tread proper by screws. This of course wears more rapidly than cast iron or steel but does not become slippery and has no affinity for ice or snow. It is easily replaced when worn. The

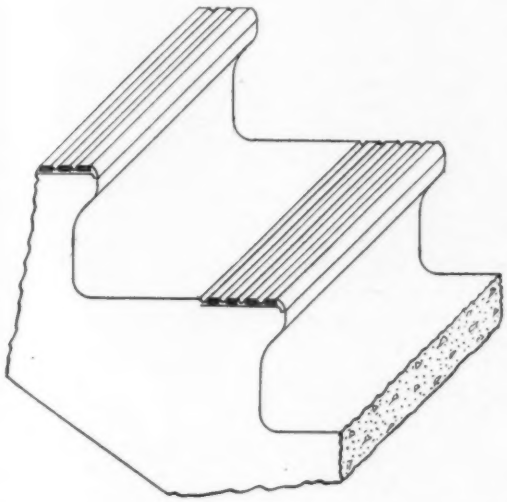


Fig. 12.—Another Type of Lead Safety Tread in Concrete Stairs

chief objections to it are that, owing to the grooves between the lead plugs, it is difficult to keep clean, and there is some chance for a heel to catch in the grooves.

Abrasive Safety Tread. The abrasive tread is made of alundum or carborundum cast into hard metal, leaving the grit projecting slightly above the surface of the metal, Figs. 13 and 14. The abrasive is also imbedded in the rounded nosing to prevent slipping on the edge of the step.

This type of safety tread is made to be used as the complete tread as well as the renewable safety tread bolted to a sub-tread. It is also made as a nosing, this form being especially useful on concrete stairs, Fig. 15. This is probably the most durable tread in heavy traffic. It is, however, hard and noisy and, like the lead tread, it is difficult to keep entirely clean. There is also a chance that the grit may be too sharp, and instances are known where the shoe has been gripped so firmly as to cause a fall.

Combined Lead and Abrasive Safety Tread. A third type of safety tread is made of grains of abrasive in a lead matrix, the whole carried on a

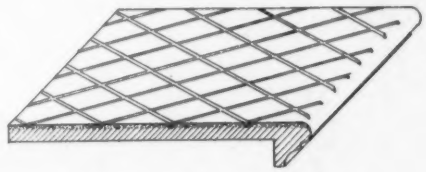


Fig 13.—Abrasive Safety Tread

steel plate. It is made either grooved, Fig. 16, or flat, Fig. 17, and with the anti-slip surface carried to the front edge.

The flat top is a great advantage, as it makes it possible to keep the stairs clean. For outdoor use it shares with the lead tread the advantage that snow or ice do not adhere. It also shares with the other type of abrasive tread the danger of too acute a grip.

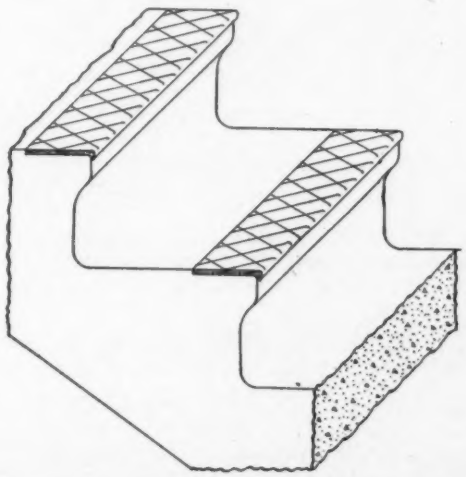


Fig. 14.—Alundum or Carborundum Safety Tread

With either of the above three types of tread it is not necessary to cover the entire width of the tread. If the front edge of the step to a depth of 3 in. to 3½ in. is protected by a non-slipping surface the remainder of the tread only needs to be brought up flush with the safety strip.

Cork Tread. Cork as a safety tread is not so well known nor so widely used as it deserves to be. It is impervious to almost all liquids and hence is easily kept in a really sanitary condition. It is

noiseless, wears surprisingly well and is the pleasantest of all materials on which to walk.

Unfortunately, its lack of strength makes it necessary to use a metal or wood nosing, Fig. 18. This is not dangerous, however, because owing to the elasticity of the cork, the nosing will wear ahead of it.

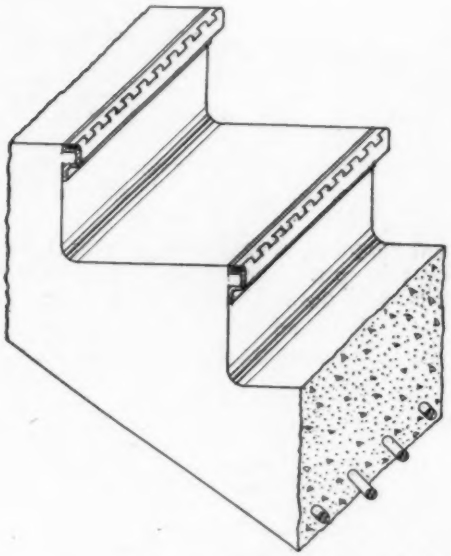


FIG. 15.—ABRASIVE SAFETY NOSING FOR CONCRETE STAIRS

Where stairs are liable to rough usage, as by dragging heavy pieces up or down, the cork tile is sometimes used with a nosing having a lead or abrasive non-slip surface, Fig. 19.

For use as a safety tread the cork is compressed into tiles ½ in. thick by 9 to 12 in. square. These are cemented to the sub-tread.

FIG. 16.—TREAD MADE OF ABRASIVE GRAINS IN LEAD MATRIX THE WHOLE CARRIED ON STEEL PLATE, GROOVED TOP

FIG. 17.—TREAD MADE OF ABRASIVE GRAINS IN LEAD MATRIX, THE WHOLE CARRIED ON STEEL PLATE, FLAT TOP

Wood Safety Tread. Except under the heaviest traffic, wood makes a splendid safety tread. Laid directly on top of a solid steel or concrete base and exposed only on the top and front edge, the fire risk is practically eliminated.

Wood offers one of the most satisfactory surfaces to step on. It is never slippery and it is

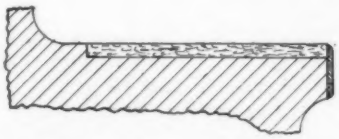


FIG. 18.—CORK TREAD WITH METAL NOSING

FIG. 19.—CORK TREAD WITH SAFETY NOSING

cheap. The worst objection to it is from a sanitary viewpoint because it absorbs expectoration.

The wood should be either oak, maple or edge-grain yellow pine to wear well, the last named being undoubtedly the longest lived. Each tread should be made in three pieces, as shown in Fig. 3. The rear strip will never need to be renewed and the center strip but rarely.

(*To be continued.*)

Plastering Specifications Needed

A series of experiments is being conducted to determine what effect the use of lime in various building materials may have on the corrosion of metal with which the material may come in contact. These experiments will have a bearing on the use of lime in concrete.

* * * *

The subject of preparation of adequate specifications for interior wall plastering is of great interest and importance to both architects, builders and the public in general. Owing to the difficulties involved in the preparation of these specifications the question of responsibility for them has been a matter of serious deliberation. The U. S. Bureau of Standards has recently been assured of the active support of the American Institute of Architects and the American Society for Testing Materials, and will proceed with the work. An advisory committee has been appointed by the Bureau of Standards to assist in the work, and it will get down to business at an early date.

Annual Meeting of the American Society of Mechanical Engineers

THE fortieth annual meeting of the American Society of Mechanical Engineers was held in the rooms of the Society, Engineering Building, New York City, December 2 to 5, and the matters discussed appealed to engineers from every section of the country. The attendance exceeded in number that of the last two annual meetings. The program for the meeting follows:

Tuesday, December 2—Opening Day

Registration begins on Tuesday, but the Council and Local Sections' representatives are to gather on Monday for meetings, and on Tuesday for a conference luncheon. On Tuesday evening the President's Address and Reception.

Wednesday Morning, December 3—Business Meeting

On Wednesday morning will be held the Annual Business Meeting: Discussion of the Report of the Aims and Organization Committee and of the Joint Conference Committee representing the Founder Societies, besides several technical reports, including the Elevator Code.

Wednesday Afternoon—Session on Appraisal and Valuation

On Wednesday afternoon will be a joint session with the American Society of Refrigerating Engineers, with papers on appraisal and valuation methods, including both industrial and street railway appraisals.

On this afternoon, also, is the Ladies' Reception and Tea, which has invariably proven one of the delightful affairs of the meeting.

Wednesday Evening—Memorial Session

In the evening the Society has been invited to participate with other societies in a commemoration meeting on the work of the famous DeLamater Iron Works and of John Ericsson, the machinery of whose Monitor was built at these works.

Thursday Morning, December 4—Keynote Session

A discussion on the general subject of the Industrial Situation in Relation to Present Conditions will be held on Thursday morning, with the following papers and addresses:

Wage Payment, A. L. DeLeeuw, Consulting Engineer.

Rights of Workers, Frederick P. Fish, chairman National Industrial Conference Board.

Systems for Mutual Control of Industry, William L. Leiserson, formerly chief, Division of Labor Administration, Working Conditions Service, U. S. Department of Labor.

Profit Sharing, Ralph E. Heilman, professor of economics and social science, Northwestern University.

Thursday Afternoon—General Session

General session, with miscellaneous technical papers. Among the subjects to be taken up, either this afternoon or at the simultaneous sessions on the day previous or on Friday, will be internal combustion engines, machine design power plants and fuels and machine-shop practice.

Thursday Evening—Reunion and Dance

In the evening there will be the usual reunion and dance, preceded by a lecture. Friday morning, December 5—Transportation session.

This will be the closing session of the meeting, to include a discussion of the possibilities of locomotive development and of motor trucks.

Second Conference on Industrial Safety Codes, Washington, D. C., December 8 and 9, 1919

THE second conference on industrial safety codes, arranged by the Bureau of Standards, was held at the offices of that bureau, Washington, D. C., Dec. 8 and 9, 1919, and was in effect a continuation of the first meeting held Jan. 15, 1919.

In the absence of Dr. Stratton, director of the Bureau of Standards, who had unexpectedly been called upon by the acting secretary of commerce for duties that had taken him out of Washington, Dr. Rosa presided.

In opening the conference, which was attended by about a hundred representatives of the various organizations interested in the adoption and enforcement of safety codes, Dr. Rosa restated the object of the meeting as presented at the first conference, namely, to insure cooperation and comparison of notes by all those most interested in safety work and securing the advice and cooperation of representatives of the many engineering organizations, insurance associations, commercial organizations and State and municipal bodies and others who are actively interested in this work. Invitations to attend the conference had been issued to these various interested parties by the Bureau of Standards.

It is hoped that as a result of this conference work will shortly be undertaken for the formulation and development of a series of national industrial safety codes that can be generally used throughout the States and municipalities of the country. Dr. Rosa gave briefly the report of the meeting held in January and also stated the principal events that had occurred since then as far as the particular question of safety codes was concerned.

Inasmuch as this work is intimately related with the adoption of various standards, the organization of the American Engineering Standards Committee and its proposed reorganization had formed one of the topics of discussion at the first meeting. Professor Adams was called upon to report on the reorganization of the American Engineering Standards Committee which had been but recently effected. This reorganization necessitated changing the constitution of the committee, which has now been modified to permit of additional membership.

Professor Adams mentioned that Dr. P. D. Agnew of the Bureau of Standards had been appointed secretary of the committee and will maintain his office in the Engineering Societies Building, New York City. Due to the press of other duties, Dr. Adams has been compelled to resign the chairmanship of the committee, and Mr. A. A. Stevenson, vice-president of the Standard Steel Corporation, has been elected chairman to succeed him.

Relative to the matter of dues, Professor Adams stated that the present five founder societies represented and the three Government departments, *i. e.*, the American Society of Civil Engineers, the American Society of Mechanical Engineers, the American Institute of Electrical Engineers, the American Institute of Mining and Metallurgical Engineers, the American Society for Testing Materials, the War Department, the Navy Department and the Department of Commerce (Bureau of Standards), are supposed to pay a fee of $500 for each representative, and they will have three representatives each.

The American Engineering Standards Committee does not prepare any standards under the rules of procedure. The Standards Committee appoints a sponsor body and the sponsor body prepares the standards.

Referring to the need of such standardization work, Professor Adams pointed out that in the single matter of symbols for the wiring of buildings there are fourteen different organizations, each with a complete set of symbols. In cases like this, the whole purpose is to reduce these multitudinous standards to a single satisfactory standard.

Dr. Lloyd of the Bureau of Standards then presented a survey of the many subjects now covered by industrial safety codes.

At the afternoon session Dr. W. L. Chaney of the Bureau of Labor Statistics spoke upon the subject of survey of industrial safety codes. He stated that it is not the function of this bureau either to produce or criticize safety codes, but rather to check up results, namely, to find out what is the actual effect of putting into operation safety codes.

Mr. Collett spoke on behalf of the American Society of Mechanical Engineers and reviewed the standardization work done by that body.

Mr. W. S. Paine, representing Mr. Van Schaack of the Aetna Life Insurance Co., recently president of the National Safety Council, said in part: "Speaking in the light of our experience as an insurance company and in working on safety codes with engineering committees, industrial boards and commissions, we have formed the belief that no one organization alone, even with the support of the law, can formulate a code covering any one of the numerous safety subjects in such a way as to be generally acceptable and of the greatest possible service to all.

"A single organization can effectively sponsor a code, but it will obtain practical and uniform results only by giving the engineer, the manufacturer, industrial boards and all organizations interested an opportunity to contribute their criticisms and often add pertinent and valuable information—in fact, to take a real part in the making of the code."

Mr. Rausch offered the following resolution, which was later adopted:

"Resolved, That the American Engineering Standards Committee be asked to request the International Association of Industrial Accident Boards and Commissions, the Bureau of Standards and the National Safety Council to organize a joint committee on safety codes, this committee to include representatives of these bodies; second, that this joint committee report upon the safety codes required, giving priority of consideration to the codes that should be taken up and the body that should be sponsor for them; and, third, that this report be put in writing and placed not later than February, 1920, in the hands of the American Engineering and Standards Committee."

Mr. S. J. Williams, secretary and chief engineer of National Safety Council, in discussing the proposal of Dr. Rosa for the appointment of an advisory committee to the Bureau of Standards, stated that to formulate these standards, so that they will be accepted, the various interests must have representation and not merely the chance to criticize and then have the criticism adopted or rejected in a further executive session at which no representation is had.

A motion to the effect that the conference indorse the proposal to put safety standards under the auspices of the American Engineering Standards Committee, as now organized, was unanimously carried.

At an informal meeting of representatives of the three organizations named in the resolution adopted plans were made for organizing the general advisory committee at once, probably arranging for a meeting in January. Before this time information will be gathered as to what codes are now being written or revised in the various States and the general advisory committee will probably recommend that these subjects be given first attention. This committee will report to the American Engineering Standards Committee not later than Feb. 1, and the definite assignment of sponsorships to the National Safety Council, the Bureau of Standards and others will doubtless follow.

We may, therefore, look forward with reasonable certainty to having within as short a time as practicable codes on at least the most important phases of safety, provided by representative and competent committees, and worthy of general acceptance by State and other authorities.

Engineering News from Europe

Engineers and Architects Co-operate to Revive Agriculture in Belgium

Great efforts are being made to revive agriculture in Belgium. Belgian engineers and architects helped to organize an important exhibition held at the Palais d'Egmont, Brussels, in September, 1919, with the assistance of the Belgian Ministry of Agriculture, which was followed by an important conference. Agricultural work during the war was dealt with, as well as its reconstruction. Models and plans of various types of farm and country houses were shown, which were considered suitable to improve and revive agriculture, and proper drainage, sewerage and sanitation were also dealt with. It appears that during the war many farmhouses were erected and farms formed. Each Belgian Province participated in the exhibition.

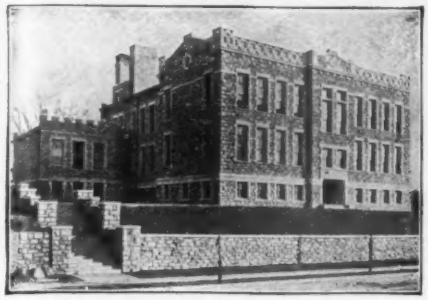
Belgian Town Planning Information

A big exhibition is being organized at Liége, Belgium, for February, 1920, by the Association des Architectes de Liége, U. P. A. Lg. (Belgium). The association will exhibit any drawings, models, etc., illustrating engineering, architectural and other matters in connection with town planning and allied subjects. These should preferably show planning and construction suitable for Belgium. M. A. Snyers, architecte diplômé, president, Association des Architectes, of 62 rue Louvres, Liége, is president of the exhibition, while the general secretary is M. Maurice Legrand, 44 rue Darchés, Liége. A similar exhibition was held at Brussels during September, 1919.

In regard to the Liége exhibition, it has been decided to display plans showing the proposed reconstruction and remodeling of the city and its environs, models of new bridges to be constructed, and plans and models of various garden cities to be erected on the outskirts.

The Organizing Committee reports that it has the cooperation and assistance of engineers, surveyors, etc., holding official posts, and burgomasters of the adjoining towns. Further, the committee reports that it has been engaged on the problem of the reconstruction of Visé (where the German armies entered Belgium), during the past four years, and has had the assistance of MM. Jacquemin, Ingénieur des Ponts et Chaussées, and Vercheval, Ingénieur des Chemins de Fer de l'Etat.

The new railway track constructed by the Germans in the vicinity is to be preserved, also the station at Visé, but many new tracks are to be constructed in the district, the Meuse is to be canalized, and a number of bridges are to be erected.



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Sound-proofed with Cabot's "Quilt"
Charles A. Smith, Architect, Kansas City, Mo.

Soundproof Floors and Partitions

Civilized schoolhouse construction now includes sound-deadening as a necessity second only to light and ventilation. Quiet rooms are essential for pupil and teacher.

CABOT'S QUILT

is the standard deadener—sound-proof, decay-proof, vermin-proof, and fire-resistant.

Sample of Quilt and Special Book on Schoolhouse Deadening sent on request.

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Cabot's Shingle Stains, Old Virginia White and Tints, Stucco and Brick Stains, Conservo Wood Preservative, Waterproofings, etc. 5-3

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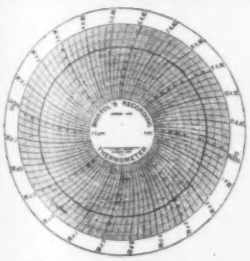

Chart Showing Even Temperature Obtained.

Gold's Thermostat is operated entirely by electricity from the lighting circuit. The Thermostat will shut off the steam at the right moment and use just enough steam to properly heat the room. None is wasted.

GOLD'S THERMOSTATIC HEAT REGULATING SYSTEM

uses no compressed air, eliminating the expensive installation and maintenance of an air compressor, air lines, etc. One Thermostat will control a number of radiators. The construction and operation is simple. Costs little to install and saves the cost many times over. Architects are invited to send for detailed description.

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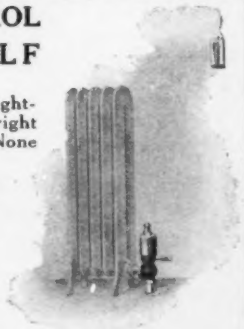

Application of Electric Valve to Radiator

Late Quotations in Building Material Markets

(Price quotations now current on building materials and supplies as quoted by dealers and jobbers for delivery in New York, Chicago, San Francisco, Seattle, and Birmingham follow. The quotations set forth are placed before readers of THE AMERICAN ARCHITECT *to afford an accurate review of market conditions, rather than for use as a basis for actual purchase. They will not only provide knowledge of the exact state of the market as to items quoted but will also present a basis to judge conditions as affecting correlating materials.)*

	New York	Chicago	San Francisco	Seattle	Birmingham
BRICK					
Common	$30.45	$14.00	$15.00	$18.00	$28.00
Face brick	55.00 to 60.00	30.00 to 40.00	46.50	23.00	45.00
BURNED CLAY					
(Delivered on Job)					
Block partition:					
3 in., per sq. ft.	0.13	0.10	.....	0.10½	.....
4 in., per sq. ft.	0.15	0.11	.....	0.10	.....
Wall coping (single slant):					
8 in., per lin. ft.	0.16	0.18	.....	.....	0.14
12 in., per ft.	0.26½	0.27	.....	.....	0.19
18 in., per ft.	0.54	0.54	.....	.....	0.31
(Corners and angles four times the price of one foot of coping the same size.)					
CEMENT					
Per bbl. in 15-cent bags (rebate 60 cents per bbl. for bags)	3.40	3.25	3.63	$4.25	4.50
FINISHED IRON AND STEEL					
(Mill Shipments)					
Bar iron, refined grade	.....	.....	.....	.....	.....
Bar iron, double refined	.....	.....	.....	.....	.....
Soft Steel bars	2.62 to 4.27	.....	.....	.....	3.50
Shapes	2.72 to 2.82	.....	.....	.....	.....
GLASS					
(Discounts from Manufacturer's Price Lists)					
Single strength, A quality, first three brackets	75%	77%	.....	.....	.....
Single strength, B quality	75%	77%	.....	83%	.....
Double strength, A quality	77%	79%	.....	83%	4.09
Double strength, B quality	79%	79%	.....	.....	.....
GYPSUM					
Plaster Board:					
27x28x1	.....	.....	.....	0.36	.....
27x48x ½	0.45	.....	.....	.....	.....
32x36x ¼	0.28	0.24	.....	.....	.....
32x36x ⅜	0.29	0.26	.....	0.36	.....
32x36x ½	0.35	.....	.....	.....	.....
Plaster blocks:					
2 in. solid, 12x30, per sq. ft.	0.13	0.12	.....	.....	.....
3 in. hollow, 12x30, per sq. ft.	0.13	0.12	.....	.....	.....
4 in. hollow, 12x30, per sq. ft.	0.14	0.13½	.....	.....	.....
6 in. hollow, 12x30, per sq. ft.	0.21¼	0.20	.....	.....	.....
HOLLOW TILE					
2x 8x12 partitions, per 1,000 sq. ft	$98.80-$111.10	.....	75.00	.....	.....
3x12x12 partitions, per 1,000 sq. ft	148.20-165.10	110.00	105.00	105.00	112.00
4x12x12 partitions, per 1,000 sq. ft	166.70-185.70	118.00	113.00	120.00	126.00
6x12x12 partitions, per 1,000 sq. ft	222.30-247.60	162.20	142.00	170.00	168.00
8x12x12 partitions, per 1,000 sq. ft	.....	221.10	208.00	230.00	224.00
10x12x12 partitions, per 1,000 sq. ft	.....	272.70	258.00	.....	.....
12x12x12 partitions, per 1,000 sq. ft	.....	316 90	.....	.....	.....
2x12x12 split furring, per 1,000 sq. ft	92.60-103.20	73.80	105.00	.....	.....
LATH					
Eastern spruce, per thousand	20.00	16.00 to 18.00	18.00	14.50	.....
No. 1 white pine, per thousand	18.00	16.00 to 18.00	20.00	.....	.....
No. 1 hemlock, per thousand	18.00	.....	18.00	.....	.....
No. 1 yellow pine, per thousand	18.00	16.00 to 18.00	18.00	.....	20.00
LIME					
Common, 200 lb. bbls., per bbl.	3.80	1.75	.....	2.85	2.50
Finishing, 300 lb. bbls., per bbl.	19.50	20.00	.....	3.25	2.50
Hydrated, in paper bags, per ton	4.00	.....	.....	25.00	2.50
LUMBER					
(Retail Prices per Thousand Delivered)					
Yellow pine, No. 1 boards, 1x6	80.00	95.00	.....	.....	120.00
Yellow pine, B, and better flooring (plain)	130.00	135.00	.....	.....	125.00
Douglas fir, 6x6 to 12x12	80.00	77.00	56.00 to 60.00	36.00	.....
Oak, quartered, 1 in., F. A. S.	325.00	370.00	430.00 to 530.00	.....	.....
Oak, plain, 1 in., F. A. S.	225.00	260 00	290.00 to 340.00	.....	.....
Oak flooring, ¼ quartered, white	220.00	370.00	470.00	.....	.....
Maple, 1 in., F. A. S.	180.00	185.00	220.00 to 280.00	.....	.....
Maple flooring, ¼ clear	175.00	370.00	225.00	.....	.....
Mahogany, 1 in., F. A. S.	.....	225.00	400.00 to 440.00	.....	.....
Spruce, 10 in.	85.00	80.00 to 140.00	96.00	.....	.....
Cypress, 1 in., F. A. S.	150.00	150.00	.....	.....	.....
METAL LATH					
Under 100 sq. yd., per sq. yd.	0.40	.....	.....	0.40	0.42

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ATLAS WHITE

Late Quotations in Building Materials Markets—*Continued*

	New York	Chicago	San Francisco	Seattle	Birmingham
PIPE					
Cast iron:					
6 in. and heavier	$67.30	$72 80	.....	.....	$63.00
4 in.	70.30	75.80	.....	.....	.....
3 in.	.....	82.80	.....	.....	.....
(And $2 additional for Class A and gas pipe)					
(Discounts to jobbers for carload lots on the Pittsburgh basing card; freight rates from Pittsburgh to New York, and also from Pittsburgh to Chicago, in carloads, per 100 lbs., are 27c. An additional 5 per cent discount is allowed to large jobbing interests over those listed below.)					
	F. O. B. Pittsburgh	F. O. B. Chicago			
Wrought: Butt Weld					
Steel:					
Black, ⅛ to 3 in....	47 to 54 %	38 to 45%	.....	4.05 net	.....
Galv., ⅛ to 3 in....	20½ to 41½%	10.1 to 30.1%	.....	6.10 net	.....
Iron:					
Black, ⅛ to 1½ in..	29½ to 34½%	11.9 to 22.6%	.....	.....	.....
Galv., ⅛ to 1½ in..	2½ to 23½%	39.9 to 4.6%	.....	.....	.....
Lap Weld					
Steel:					
Black, 2½ to 6 in..	50 %	41.1%	.....	.....	.....
Galv., 2½ to 6 in..	37½%	27.1%	.....	.....	.....
Iron.					
Black, 2½ to 6 in..	34½%	18%	.....	.....	.....
Galv., 2½ to 6 in.....	21½%	3.6%	.....	.....	.....
PLASTER					
Neat wall cement in 15-cent bags, per ton	23.50	19.00	18.50 to 20 00	$22.50	24.00
Finishing plaster	25.00	19.50	19.50 to 21 00	24.00	24.00
Lath mortar, in cloth bags, per ton	16.50	.....	.....	.....	.....
RADIATION					
Discount from list on standard heights	45%	41 to 42	.....	.....	44.45
REINFORCING BARS					
High carbon steel from mill	48.50	.....	4.00	5.00	.....
Medium steel from mill	48.50	.....	4.00	5.00	4.00
ROOFING MATERIAL					
Tarred felt paper:					
No. 1—25 lbs. to 100 sq. ft., per ton	81.00	90 00	.....	per cwt. 2.50	.....
No. 2—16 lbs. to 100 sq. ft., per ton	81.25	90 00	.....	per cwt. 3.25	.....
No. 3—12 lbs. to 100 sq. ft. per ton	81.63	90.00	.....	per cwt. 3.35	.....
Rosin sized sheathing, per ton	75.00	.....	.....	cwt. 105.00	.....
Corrugated roofing, galvanized, 2½ in. corrugation, over flat sheets, per 100 lbs	0.30	.....	.....	.....	.....
SHINGLES					
Red cedar, 5 to 2, clear, per thousand	15.00	10 00	16.00	7.15	.....
White cedar, extra star. A star, per thousand	16.00	9.50	17.00	5.75	.....
SLATE ROOFING					
	F. O. B. Cars Quarry Station				
Pennsylvania:					
Best Bangor	$7.75 to $9.00	.....	.....	.....	.....
No. 1 Bangor Ribbon	6.75 to 7.00	.....	.....	.....	.....
Pen Argyl	6.50 to 7.25	.....	.....	.....	.....
Peach Bottom	10.50 to 12.50	.....	.....	.....	.....
No. 1 Chapman	6.25 to 7.25	.....	.....	.....	.....
Vermont:					
No. 1 Sea Green	4.25 to 6.75	.....	.....	.....	.....
Unfading Green	9.00 to 10.50	.....	.....	.....	.....
Red	12.00 to 20.00	.....	.....	.....	.....
Maine:					
Brownsville, U'f'g Black, No. 1	12.00	.....	.....	.....	.....
Slaters' felt, 30 lb. roll	0.92	.....	.....	.....	.....
Slaters' felt, 40 lb. roll	1.22	.....	.....	.....	.....
STRUCTURAL STEEL					
Beams and channel, 3 to 15 in. per lb	3.47	3.47	4.75 to 5.00	4.70 to 5.00	0.05½
Beams and channel, over 15 in., per lb	3.57	3.57	.....	.....	0.05¾
Angles, 3 to 6 in	3.47	3.47	.....	4.10	0.05
Zees and tees	3.57	3.47 to 3.52	.....	.....	.....
Steel bars, half extras, from mill	.....	.....	4.90	4.00	4.25
STUCCO					
In cloth, per ton (white, mixed)	22.50	20.50	.....	.....	.....
STUCCO BOARD					
Medium weight stucco board, plain, per thousand sq. ft.	42.50	65.00	.....	.....	60 00
Medium weight stucco board, creosoted, per thousand sq. ft.	50.00	70.00	.....	.....	.....
Heavy weight stucco board, plain, per thousand sq. ft.	55.00	75 00	.....	.....	.....
Heavy weight stucco board, creosoted, per thousand sq. ft.	60.00	80.00	.....	.....	.....
Medium weight stucco board, plain, narrow key, per thousand sq. ft.	50.00	75.00	.....	.....	.....
Medium weight stucco board, narrow key, creosoted, per thousand sq. ft.	55.00	70 00	.....	.....	.....
Insulating board, heavy felt background, per thousand sq. ft.	50.00	70.00	.....	.....	.....
SHEATHING BOARD					
Heavy weight sheathing board, per thousand sq. ft.	50.00	70 00	.....	.....	65.00
Medium weight sheathing board, per thousand sq. ft.	46.00	63.00	.....	.....	.....
Stucco or plaster board, sheathing board and insulating board are in rolls containing one sheet 25 ft. long and 4 ft. wide (100 sq. ft.)					
WALL BOARD					
Wall board, shipped any length, 4 ft. wide, per thousand	45.00	50.00	.....	46.00	53.00
Packed flat in cars if ordered in less than car lots. Add $5.00 per thousand ft. for crating.					